The Marker Lamp

Volume 62 Number 3 Summer 2016

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The Marker Lamp

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The editorial policy of The Marker Lamp, the official publication of The Lone Star Region, shall be to contribute, wherever possible, to the promotion, growth and understanding of the hobby of Model Railroading, within the confines of good taste and responsibility. The Marker Lamp is published once each quarter by and for the members of The Lone Star Region of The National Model Railroad Association. Articles appearing in The Marker Lamp are the opinions of the authors and do not necessarily reflect the position or policies of the officers or membership of The Lone Star Region or The National Model Railroad Association.

Address all correspondence, news, photos and drawings to the editor. All material will be gladly accepted and will be used depending on the availability of space and suitability of material. None will be returned unless a stamped, self-addressed envelope is provided. Correspondence relating to Pike Ads and Dealer Ads should be addressed to Donna Orr, 2625 Rolling Meadows Dr., Rockwall, TX 75087 (972) 722-4769 dlo-rls@sbcglobal.net

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President's Message

by Steve Barkley, MMR
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It's been a fun, productive, and busy three months since the last Marker Lamp came out in May. Let's look at the highlights.

The Arlington LSR convention

Mike Mackey and John Garfield assisted by volunteers from throughout the LSR treated over 200 registrants to a great convention. There were clinics, a fun banquet raffle, good food, a model contest featuring truly great models, and lots of time to see old friends and make new ones.

Charlie Getz, the President of the NMRA, was a clinician and the guest speaker at the banquet. For those of you who do not know Charlie, he is a reformed (retired) lawyer and a great speaker. He gave the perfect convention speech. He kept it light, told funny jokes, and complimented the convention staff, LSR members' spouses, and participants.

Larry Swigert chaired the raffle committee. He had lots of goodies to give away to lucky ticket purchasers. I actually won 4 first class tickets on the Durango and Silverton Railroad. Judy and I have already made our reservations for the last week in September. I'll share photos in the next Marker Lamp.

If I had not bought tickets, I would not have won. So, next year plan on coming to the Houston convention, entering the model contest, and buying raffle tickets!

Remote Dispatching Using JMRI

Sam Nicastro and Eric Hershman gave a cutting edge clinic on Remote Dispatching using JMRI. Sam and Eric are both 13 years old. Many of you know Sam's father, David, who is an exceptional model railroader and has built a spectacular layout at his home in Austin. That railroad runs using DCC and also uses JMRI for the CTC system, turnout control, and the like. Oh, it's also connected to the Internet.

Sam and Eric wanted to be able to operate the layout together. However, Eric lives in Dallas and Sam lives in Austin. No problem! They found a computer program that allows Eric's computer in Dallas to access the layout computer in Austin in real time. So, Eric can log onto Sam's computer and run the layout in Austin.

Then Sam and Eric found a method to transmit a live video feed from Sam's I Phone through the layout computer in Austin to Eric's computer in Dallas. The I Phone was installed on a flatcar located at the front of a train so that the I Phone transmitted video from the perspective of an engineer. JMRI includes throttle that Eric can use to run the train with the camera from his house in Dallas.

They demonstrated this at the convention. Sam's Mom was the switchman in Austin who rerailed cars and gave an occasional nudge to stalled trains.
Sam and Eric developed this on their own. I asked them whether anyone else had done this to their knowledge and they did not know of anyone else.

If you are interested in duplicating this, I think this is what is required:

1. A remote computer with decent broadband access to the internet.
2. A home computer attached to the home layout.
3. A program to allow one computer to access and operate a remote computer or program on a remote computer. I use Go to My PC to access my office computer from home. It works well but is not free. Here's a link to a PC World article that describes many ways to remotely access and use a remote computer: http://www.pcworld.com/article/2687241/5-ways-to-use-your-pc-remotely.html
4. A computer program that operates the home layout. JMRI is free and there is a yahoo discussion group. Here's the JMRI web site which includes downloads to the latest version 4.4: http://jmri.org/
5. A camera equipped flatcar, engine, or whatever that will broadcast video to the home computer. Sam and Eric used an I Phone. There are also small cameras sold that broadcast a signal to a television set. These may also work.
6. Someone at the home layout who can rerail cars, turn power on and off, and keep the cats off the layout!

This is not *Buck Rogers* science. I suspect all of us have children and/or grandchildren that are into computer gaming. Some of us also participate. Computer gamers compete over the Internet with other gamers from all over the world. This is a huge industry.

Remember to keep your system password protected. You do not want just anybody to have access to your computers.

Sam Nicastro and Eric are extremely intelligent model railroaders who have adapted their interest and knowledge of computers to model railroading. Their clinic was fascinating!

Sam and Eric, will you please write an article for The Marker Lamp on your accomplishment? You might also send it to one of the model railroad magazines.

Special Interest Groups and the NMRA

Charlie Getz was asked about the NMRA recognizing Special Interest Groups for LEGO, Lionel, and the like. The NMRA will do this! All that is required is that the President of the SIG be an NMRA member. There is no requirement that all the SIG members also belong to the NMRA. The Operations SIG is one such group. So, if you are interested consider forming a national SIP to include Lionel, tinplate, and LEGO.

Elections are coming

Steve Blackson is one of the new at large directors, and he also volunteered to chair the LSR Nominations Committee. He is looking for candidates for this coming year's election. Here's his contact information:

Steve Blackson
9803 Mandeville Cir.
Austin, TX 78750
512-918-2630
steve@windypoint.com

This year the offices to be elected are President, Treasurer, Directors for Divisions 1, 3, 5 and 7. I am not running for re-election as I am limited to two terms. I understand that Donna Orr is not running for reelection as Treasurer.

Don't be shy! Throw your railroad cap in the ring and let Steve know that you want to run for one of these offices. It's a great way to really become involved with the LSR and you'll earn Achievement Program points as well.

The 2017 LSR Convention

Nest year's convention returns to Houston. Randall Willson and Robert Ashcraft will Co-Chair the convention. Here's their contact information:

Randall Wilson - Co-Chair
3519 Highland Lakes Dr.
Kingwood, TX 77339
281-358-0574
railtale@kingwoodcable.com

Robert Ashcraft - Co-Chair
2008 Westminister St.
Pearland, TX 77581
281-997-6534
crash8473@comcast.com

They will be looking for help! Every one of us can give a clinic on something! They will also be looking for layouts to host operating sessions and to be open for visitors.

It is not too early to start on contest entries.

My Final Thoughts

Too many of us forget the value of personal contact and communication. We view email as an acceptable substitute for personally meeting and talking with others. I've read that 90% of communication is non-verbal. I am guilty of this!

The LSR Annual Convention provides all of us, officers and members alike, the chance to sit down and really work out conflicts and get to know each other. Come to Houston next June and have fun!

Deadlines

by Riley Triggs
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Prototype brakeman stand with handle

The best time to get stuff done is when you have a deadline. My deadline is a large operating session with out of town guests, so the pressure is on, but it is giving me the opportunity to prioritize my layout above all the other things that usually crowd out my working on the layout.

One of the things I've been meaning to do for quite a while now is to create a set of scale figure brakemen for my *Brakeman!* operations game (*maybe more on this next issue*). The game is about simulating the movement of the train crew for actions like coupling/uncoupling, opening gates, throwing switches, etc.

This requires moving around a brakeman, which until now was a yellow wire nut, so that he is next to whatever action needs to happen. This is all to slow down and more prototypically simulate operations.

Coupled with momentum and braking on a DCC throttle, this moves the frame of reference from the old DC days of 'operating your track', to the DCC era of 'operating your trains', to now a prototypical future of 'train crews operating your trains'.

So with a little cardboard and a Woodland Scenics figure, I now have a handy little addtion to the layout

that will be something that directly makes my upcoming session (hopefully) more intersting for my guests. The inevitable question this raises, though, is, "why don't I make my hobby a priority more often?"

That's something I'll continue to ask myself after this next op session, but in the meantime, I have stuff I gotta get done!

Riley

Up The Tracks

By Bill Dryden NMRA & LSR Life Member

Here are upcoming events within the LSR of which I am aware. I will provide all the information YOU send me or I can glean from other publications, websites, etc., for these events. Additional information may be available through the NMRA Scale Rails and/or various trade magazines or various websites. Also, note that all show times and dates are at the discretion of the sponsoring organization and are subject to change. Please forward any and all information about upcoming events or activities in your area, club, etc., to me via e-mail at bdr149@airmail.net.

Lone Star Region 66th Annual Convention (2017)
The Bayou City Limited; June 7 – 10
Check the LSR website: http://www.lonestarregion.com/convention.shtml
Come all!! PARTICIPATE!!!

RECURRING EVENTS AND MEETINGS

LSR Division 3 - Northeast Texas Division – Allen
The Trinity River Division meets on the Second Saturday of every month at Christ the Servant Lutheran Church, Allen. Occasionally the day or branch changes due to scheduling conflicts so pay close attention to the e-mail meeting notices that go out a week before the meeting. If you would like to be added to the e-mail list contact Jerry Hoverson JKHoverson@gmail.com.

LSR Division 4 – Cen-Tex Division – Austin
The Cen-Tex Division meets bi-monthly at the Austin Northwest Recreational Center, 2913 Northland Drive, Austin, TX. Meetings are held at 10:00 am on the Second Saturday of the odd months and include clinics, show-and-tell, DCC minute, social activities and a layout open house. For more information about upcoming meetings, see http://centexnmra.org or contact director@centexnmra.org to be added to the mail list.

Alamo Model Railroad Engineers - San Antonio
The Alamo Model Railroad Engineers meets the 2nd Friday of the month at 7:30 p.m. in the Zucht Building at the Texas Transportation Museum, 11791 Wetmore Rd., San Antonio TX. For more information call Peter Shavney (210) 317-3661 or Gene Turner (210) 355-2777; or visit the web site www.alamomodelrailroadengineers.com.

Houston Area Live Steamers
HALS has over 9,000 feet of track for you to enjoy and ride on most any Saturday of the year. Someone is usually there every Saturday with special run, operations, waybills/timetable, work and fun run days scheduled throughout the year. Our public run days are the third Saturday of the month March through November. Come see our 2,500 foot expansion in Phase 4. Model Railroaders (any scale) are welcome to attend most any time. Check our web site out at www.hals.org for schedule of events or e-mail Rick White – rick.white.jr@gmail.com for more information.

North Texas Council of Railroad Clubs – Irving
The North Texas Council of Railroad Clubs (NTC) meets the 3rd Tuesday of the month. Visit the website www.dfwtrainshows.com for more information about the NTC, its meeting site or member clubs.

New Braunfels Railroad Museum
Kids Fun Day is held on the 1st and 3rd Saturday of each month, 10:00 am to 2:00 pm. New Braunfels Railroad Museum, 302 South San Antonio Street, in the 1907 Restored Railroad Depot; New Braunfels, TX. Museum phone (830) 627-2447. Kids of all ages will have the opportunity to run model trains and become a Jr. Engineer. Also among the displays at the Kids Fun Day will be a large US Army Model Garden (G) Scale and Lego Trains. Visit our Steam Engine, Caboose, Dining Car (available for Birthday Parties) and Box Car. There will be other fun, train related activities, additional model trains, train artifacts, our 1907 depot are on display. The Railroad Museum opens at 10:00 am on Saturdays. For field trip scheduling and more information, call Howard Young (210) 542-6121,
or visit us at www.nbrrm.org.

Texas Western Model Railroad Club – Forest Hills
The Texas Western Model Railroad Club meets for its business meeting every 1st Thursday of the month at 7:00 PM. The Club is located at 6808 Forest Hills Drive, Forest Hills, TX. For more information: (682) 587-2092 or www.twmrc.org or email cdo@twmrc.org.

Museum of the American Railroad 2016 Summer Walking Tours
Guided walking tours of the Museum's new Frisco facility are back! They are pleased to announce the 2016 Summer Walking Tour schedule. Tours will run each Thursday and Saturday at 10AM and 11:30AM from June 9th through September 3rd. Admission is $8 for adults and $4 for children ages 3-12, and includes the Railroad Museum's 2nd floor exhibits at the Frisco Heritage Museum. Please phone ahead (214) 428-0101 to check the status of the tour schedule in the event of inclement weather. Tours will last approximately 45 minutes and will originate at the Frisco Heritage Museum (6455 Page Street, Frisco, TX 75034) - just a few blocks north of the Railroad Museum. Parking is available at the Frisco Discovery Center (8004 Dallas Parkway, Frisco, TX 75034).

EVENTS AND SHOWS

September

17th – 18th 33rd Annual Temple Train Show. Sat. 10:00 to 5:00 p.m., Sun. 10:00 a.m. to 4:00 p.m. Adults $6, kids under 12 Free with paid adult, Seniors & Active Duty Military Discounts. Frank Mayborn Center, 3303 North 3rd Street, Temple, TX. More information: www.centramod.com.

24th Museum of the American Railroad – Amtrak Exhibit Train. Sat. 9:00 a.m. - 6:00 p.m. Free admission to Museum. Museum of the American Railroad, 6465 Page Street, Frisco, TX. More information: www.museumoftheamericanrailroad.org; www.amtrak.com/exhibit-train or (214) 428-0101

October

1st Galveston Railroad Museum – Amtrak Exhibit Train. Sat. 10:00 a.m. to 5:00 p.m. Free admission to Museum. Galveston Railroad Museum, 2602 Santa Fe Place, Galveston, TX. For more information: www.galvestonrrmuseum.com; www.amtrak.com/exhibit-train or (409) 765-5700

1st TW TrainWorx 5th Annual Layout Festival. Sat. 9:00 a.m. to 5:00 p.m. 2808 McGowan St., Dallas, TX. More information (877) 881-4997or http://www.twtrainworx.com

1st – 2nd 2nd Annual Fall Plano Train Show. (Sponsored by the North Texas Council of Railroad Clubs) Sat. 10:00 a.m. to 5:00 p.m., Sun. 10:00 am to 4:00 p.m. Adults $8, Kids Under 12 free with paid adult admission, Scouts & Scout Leaders in Uniform, Admission is Free. Plano Centre; 2000 East Spring Creek Parkway; Plano, TX. For more information, visit http://www.dfwtrainshows.com.

1st – 2nd San Antonio Model Train Show 2016. Sat. 9:00 a.m. to 5:00 p.m., Sun. 10:00 a.m. to 4:00 p.m. Adults $8, Children (10 - 17) $4. Freeman Coliseum, Expo Hall A, 3201 E. Houston, San Antonio TX. For more information: http://www.txtransportationmuseum.org/event-amre-train-show.php.

8th – 9th 2016 Texas Western Train Show. Sat. 10:00 a.m. to 5:00 p.m.; Sun. 11:00 a.m. to 4:00 p.m. Admission $7, Kids 12 and under Free with paid adult. Family Oriented with displays for all ages. Special Attraction: LEGO train layout and activities! Also featuring dealer tables with model railroad supplies, model train displays, model and photo contest area, how-to clinics, hourly door prizes, Choo Choo Express Train Ride in the parking lot, and much more. Forest Hill Civic Ctr., 6901 Wichita St, Forest Hill, 76140. For more information: email cao@twmrc.org or visit http://twmrc.org/.

8th – 9th Galveston Model Railroad Train Show. Sat. 10:00 a.m. to 5:00 p.m., Sun. 10:00 a.m. to 5:00 p.m. Adults $8, Kids under 12 free. Galveston Railroad Museum, 2602 Santa Fe Place, Galveston, TX. For more information: call Sandy Cobb or Morris Gould (409) 765-5700, or http://www.galvestonrrmuseum.com/events.html.

20th – 21st Southwest O Scale Meet. Sat. 9:00 a.m. to 3:30 p.m. Fort Worth Academy, 7301 Dutch Branch Road, Fort Worth, TX. For more information: swoscalemeet@gmail.com, or http://oscalesw.com/.

21st - 23rd CenTex Meet in Austin at St David's Episcopal Church 710 Trinity, Austin, TX 78701. Clinics and contest on Saturday, layout tour Saturday and Sunday, and operating sessions on Friday night. For more and continually updated information: http://centexnmra.org/meet2016/meet.html

29th – 30th New Braunfels Railroad Museum's 8th Annual Train Show. Sat. 10:00 a.m. to 5:00 p.m., Sun. 10:00 a.m. to 4:00 p.m. Adults (14+) $8, Kids 5 – 13 $2, Kids Under 3 FREE. New Braunfels Civic Center, 375 South Castell Avenue, New Braunfels, TX. For more information: call Jim Edmondson (830) 629-2071, e-mail: jedmondson@satx.rr.com or web site: www.nbrrm.org.

November

5th - December 4th The Annual Fall Layout Tour of model railroad in the Houston area is scheduled for the weekends of Nov. 5 – Dec. 4. It isan opportunity for local model railroaders in the area to open their layouts up and let the public see their work. Each weekend will feature models in different areas of Houston and the surrounding areas. Check the club website http://sanjacmodeltrains.org/ for a list of layouts and dates and updates as they occur.

5th – 6th Annual Texas City Museum Train Festival. Sat. 10:00 a.m. to 4:00 p.m., Sun. 10:00 a.m. to 4:00 p.m. Admission: Adults/Seniors $5 Kids $2. Texas City Museum, 409 6th Street North, Texas City, TX. More information: (409) 229-1660, or http://www.gcmrrc.org/train-shows.html.

11th – 13th East Texas & Gulf Rail Modelers Association Train Show. Thurs. 1:00 p.m. to 5:00 p.m.' Fri. 9:00 a.m. to 5:00 p.m., Sat. 9:00 to 3:00 p.m. Admission: Free. Hebert Public Library, 2025 Merriman Street, Port Neches, TX. More information: (409) 334-1361, e-mail lmcmahen@gt.rr.com or http://www.etgrma.com/.

December

10th Galveston Railroad Museum's Santa Train. Admission: "TBD". More information: (409) 765-5700, or http://www.galvestonrrmuseum.com/events.html.

January 2017

21st – 22nd Dallas Area Train Show. (Sponsored by the North Texas Council of Railroad Clubs) Sat. 10:00 a.m. to 5:00 p.m., Sun. 10:00 am to 4:00 p.m. Adults $8, Kids Under 12 Free with Paid Adult Admission, Scouts & Scout Leaders in Uniform, Admission is Free. Plano Centre; 2000 East Spring Creek Parkway; Plano, TX. For more information, visit http://www.dfwtrainshows.com.

28th – 29th SAMRA 41st Annual Jamboree & Train Show. Sat. 9:00 a.m. to 5:00 p.m., Sun. 10:00 a.m. to 4:00 p.m. Adults $7, under 16 Free (limit 3) with paid adult admission. Austin Highway Event Center, 1948 Austin Hwy, San Antonio, TX. For more information: http://www.samratx.org/shows.html or e-mail: jamboree@samratx.com.

May

20th – 21st Jefferson's Train Days Celebration. Sat. 10:00 a.m. to 5:00 p.m., Sun. 11:00 a.m. to 4:00 p.m. Adults $6, children under 12 Free (Includes layout tour of R.D. Moses T&P Model Railroad). Separate Train Days activities requiring separate admission fee include Historic Jefferson Railway narrow gauge train ride and Jay Gould's business car "ATALANTA" guided tour. (Discounts available for multiple admissions) More information contact the Museum at (866) 398 – 2038 or (903) 665 – 2775, or www.jeffersonmuseum.com, www.jeffersontraindays.com and www.jeffersonrailway.com.

Excursion Train Trips

Austin Steam Train; Cedar Park, TX; (512) 477-8468; www.austinsteamtrain.org
Grapevine Vintage Railroad; Grapevine, TX; (817) 410-3185; www.gvrr.com
Old Hickory Railroad; Jackson, LA; (225) 634-7397; www.louisianasteamtrain.com
Texas State Railroad; Palestine & Rusk, TX; (888) 987-2461; www.texasstaterr.com

Please consider our deadlines for submittals and publications to allow adequate lead time to correctly announce your event – Column submission deadlines are the 15th of January, April, July and October; publication of the ***Marker Lamp*** is the middle of the following month.

Stuck

By Duane Richardson, MMR
duane@purgatoryanddevilriver.com

I wrote recently about procrastination and once again I found myself running up against a deadline…3 actually. I had a contest model to finish and photograph, an HO version of it to build, photograph, and write an article about it and then this column to write. Just like almost every year in the past I put the finishing touches on the contest model by working most of the opening day of the convention on it. I finished it early on that Thursday and drove over to the convention while the last of the glue was drying.

The following weekend was the three day holiday weekend which gave me enough time to build an HO version and get a magazine article off to the editor. Now it's time to work on what you are reading now. It was thinking back on this sticky situation that reminded me that I had received an email from an LSR member asking me to talk about glues.

Other than a SnapTite model car/airplane or a brass model where you solder everything together, if you are building a model you are going to need a glue or two. I have tried most glues and I'm always willing to spend a couple of bucks to try something new. In fact, I recently found a new one thanks to a clinic presented by Marty Vaughn up in Kansas City which I'll cover later. I have some likes and dislikes but just about all of them will work for one purpose or another. What is the right glue for me? That depends on what materials you are trying to bond together.

For styrene I used to use Testors modeling glue in the red and white tube. I still keep a tube handy for some applications but when I'm working with styrene I use MEK. MEK comes in various brands and they all work the same way.

The chemical make-up of MEK melts the plastic and welds the two parts together. The Testors glue has MEK in it but it works slower. Now, DO NOT go and buy a can of it in the paint department of your local home center. This is full strength and is not suited for modeling. The fumes are also said to cause cancer. I would not recommend taking a big deep breath of the modeling type, but it basically has next to no fumes. It does evaporate VERY quickly.

I apply it with a micro-brush or a cheap paint brush. Dip it in the MEK, put the lid back over the jar and bond the joint. Be careful to make sure your pieces are exactly where you want them because the bond only takes a couple of seconds. You will not have time to clamp them straight after you apply the MEK.

For wood you can go with any one of several choices. Regular white glue is effective but avoid any labeled 'School Glue'. These are designed to come out of your kids clothes so they will dissolve in humid environments. While white glue is OK the yellow carpenters glue is better. I use yellow glue when I'm building furniture or musical instruments, but I really don't like it for modeling. It makes a very solid joint but it tends to be a very stiff joint. If you have to flex a model at all later for any reason (like trying to correct a warp or a joint that slipped out of square, then this glue is very unforgiving.

I am a fan of Aleene's Tacky Glue for most projects and materials. It dries clear and it gives you a flexible joint. Aleene's comes in a clear which I really don't care for (mainly because it's hard to find on my shot glass… more on that in a bit).

I recently found that Aleene's has a Turbo Tacky Glue that comes with the applicator at the bottom. I haven't used it yet but I've always had to keep the regular bottle sitting upside down in a holder so the glue doesn't settle to the bottom. The Turbo Tacky is supposed to grab the same but dry in half the time. This means I can work faster so I'm a big fan of faster drying time.

Tacky Glue is very similar to Canopy Glue. Canopy Glues, like RC56, have long been a favorite among model airplane builders for gluing in canopy glass. In the clinic I mentioned earlier, Marty Vaughn brought up a glue called Crafter Pick. This is basically canopy glue but it's a much bigger bottle for the same price. If Tacky Glue dries a little quick for you the Crafter's Pick will give you a little more work time.

I've found that I like this for gluing in window glass and putting down paper shingles on roofs but I like Aleene's for just about everything else.

The Crafter's Pick dries even more clear than the Tacky Glue and is even more flexible. Mike Barrett has taught trestle building clinics for the LSR for several years, and he likes the canopy glue for building trestles because it flexes. I'll be trying the Crafter's Pick on my next trestle for sure.

If you have a joint that you really need to make quickly then a CA, or super glue, might be what you need. In wood working I like to use the runny CA for stabilizing end grain on boards or repairing some types of damage. For modeling I've found this causes me some trouble (ask me sometime about runny CA, NASCAR, and how I glued my forearm to my bench).

My favorite is from Loctite called Gel Control. It's a gap filling glue and the Loctite brand has an applicator with 2 squeeze buttons on the sides. Squeeze the buttons together and it pushes glue out. Let the buttons go and is sucks the glue back down into the container so it doesn't dry and clog the tube.

Now, if that isn't fast enough for you then you can apply some Zip Kicker and it will bond instantly. Just avoid getting it on your fingers and then get Kicker on there. It gets VERY hot as it cures and is painful if the two get on your skin (again, ask me how I know this).

All of the Kicker I have used comes in a small, pump spray bottle and it tends to get it all over the place with very little where you actually need it. It's also a bit oily which might cause problem applying finish later (or to the finish you may already have in place). I'll spray a small amount into a container I can quickly cover, and then I put a small bit of kicker on one side of the joint and CA on the other. This gives you a very fast bond but you have to work quickly.

Also, keep the Kicker stored somewhere besides your work bench. The fumes alone will sneak into the CA bottle and harden it quick. I am so paranoid about it I don't even keep it in the same room. Lastly, if you are going to be going some period of time between modeling projects it's good to keep your CA in the refrigerator

in a Zip-Lock bag. The cooler temp will make it last much longer. Typically, I run out before it dries out.

While I don't use this very often, Epoxy is another option that does have its place in the modeling world. Epoxy's come, usually, in 2 parts and you have to mix it together to activate the glue.
Once it's dry it is very hard and bonds most materials together very well. About the only time I use this is if I'm bonding metal to metal and I need a strong joint (like on the walls of a Woodland Scenics building that are cast in metal).

The only thing I can I add about Epoxy is that it's really hard to clean up so be extra careful not to use too much and if you do clean it up immediately because once it's dry it's really difficult to clean it off. This is really not meant for fine work. For gluing on small, metal detail parts I just use CA.

Lastly we get around to some special purpose glues. Woodland Scenics makes Accent Glue. This is meant for gluing down detail parts and figures. The neat part with this is allows you to reposition figures. While I haven't tried to test it but Accent Glue seems really similar to Tacky Glue.

I also have something I like better for figures. Department 56 people have a temporary adhesive that works really nicely. It comes in a small tub and it's a wax type material. Now, my favorite for figures is mortician's wax. You can use this to stage a picture or two and then remove the figures if need be.

There are also uses for silicon caulk and glues like E6000 for mounting motors in locomotives and still maintaining the isolation needed to prevent shorting out your decoder. There is also the old school track laying favorite Pliobond. Pliobond is a glue that you put on the bottom of your rail, say on a trestle, where you can't spike it down easily. Once the glue has dried you come back and put a hot soldering iron on the rail and it will melt the glue. This glue then seeps into the ties and creates a strong joint between the ties and the rail.

Now that we have covered most of the various glues let's talk a bit about how to use it. I know a lot of modelers just squeeze some onto some scrap paper and work with it from there. It's really easy to get your elbow in it if you aren't careful.

I took a shot glass and turned it upside down on my workbench because most shot glasses have a concaved bottom that makes a nice well for glue. It gets the glue up off your work surface and if you do manage to knock it over (which takes some doing) it will just run in a circle and not right off the edge of your bench. It's also handy that most of the glues don't stick to glass very well and you can use a screwdriver to pry off the dried glue and continue on.

I also use a quilting headpin to apply glue to the model. This gives me much finer control by allowing me to get a small amount of glue into tighter spaces. If you a need to put some glue up into a hole and need a flexible applicator try saving an old micro-brush, cut the bad

Photo 7

foam end off and use the flexible, plastic shaft to apply the glue.

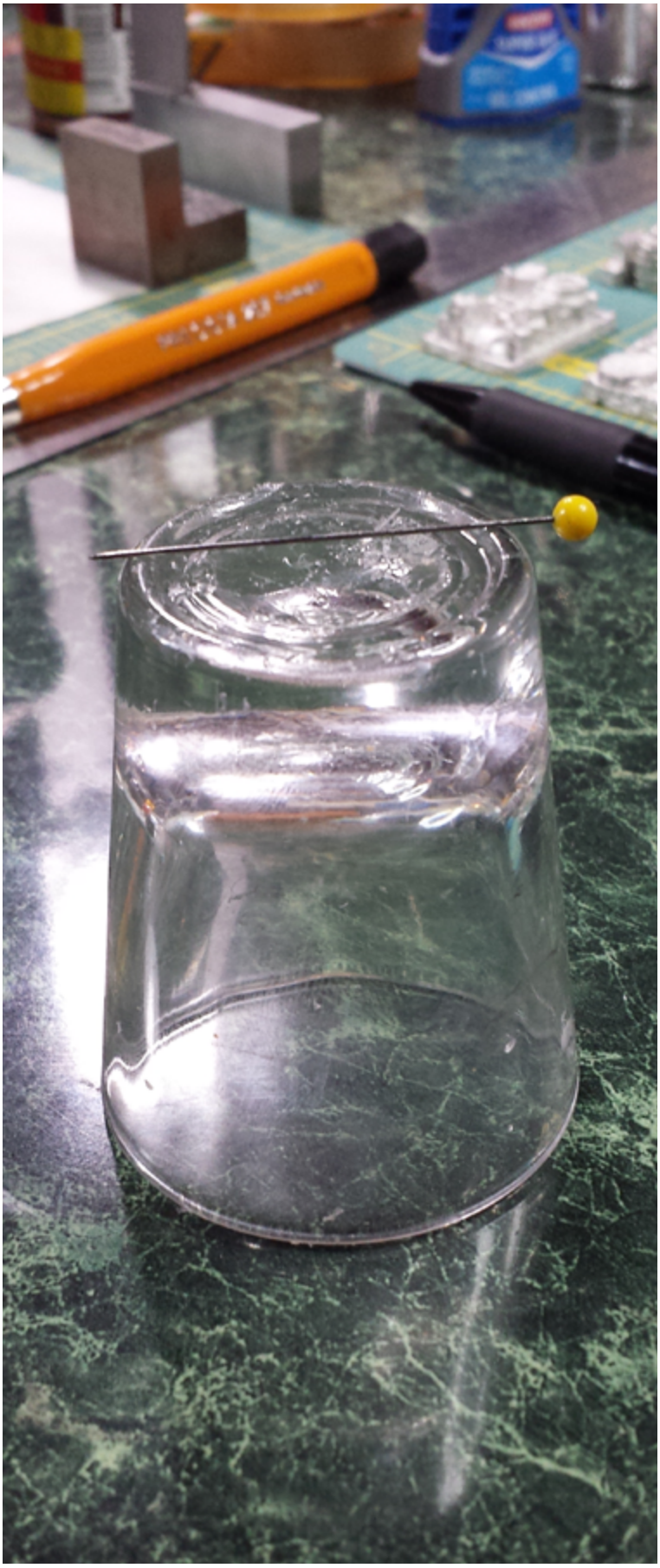
Lastly, squeeze-out is inevitable. This is where you glue 2 or more pieces together and glue gets pushed out of the joint. I know some furniture makers will tell you that if you don't get squeeze-out then you aren't using enough glue. That might be a bit extreme but it does ensure that there isn't a dry spot in the joint.

Where a lot of woodworkers and modelers make the same mistake with squeeze-out is that they will take their finger and wipe it off. That pushes glue down into the wood grain and will seal it. Then it won't take stains the same as the rest of the wood. There are 2 schools of thought on what to do with it.

Some like to wipe it off with a damp cloth and some like to let it dry and cut it off. I don't like a damp cloth for modeling. If you are using wood it just introduces more water to the wood which could cause it to warp. It could also seep into the joint and dilute the glue which would make a weaker joint. Since I use Tacky Glue for most of my work it is pretty simple just to cut away the squeeze-out after it dries.

I hope this answers some questions and maybe given you some options to think about for future projects. If you have one you like that I didn't mention, please send me an email and I'll give it a try. And, as always, if you have something that you would like for me to cover please feel free to contact me and I'll see what I can do about digging up some information.

Until next time, keep the boiler full, the fires hot and your wheels on the rails. ML



Operations

Controlling Train Movements Part 2

By Peter Kazmir
pakazmir@gmail.com

Last issue, we began looking at ways that railroads control train movements. Starting with blocks and stations, moving to timetables, train orders and warrants, and finally to direct train control, railroads have found increasingly sophisticated ways to ensure safety while maximizing efficiency.

In this issue, we'll conclude our discussion by looking at ways that railroads manage operations through the use of automation, typically without direct contact with engineers and conductors. The most popular such systems in the 20th century leveraged signals, and the key to automation was in remote train detection and the clever logic that was devised to utilize it.

Train Detection Circuits

Train detection circuits were first used in the UK in 1864 but William Robinson, an American Engineer, designed a safer variant in 1872 that would show the block as occupied if there was a failure in the circuit. In his design, which continues to be used today (with improvements), power is applied to each rail and a relay coil is wired across them. The presence of a train shorts out the current and flips a relay, which in turn can control a signal. There is an insulated gap (or section) between blocks. (See Figure 1.) This is similar to how model railroad train detection circuits work, although typically in that case a

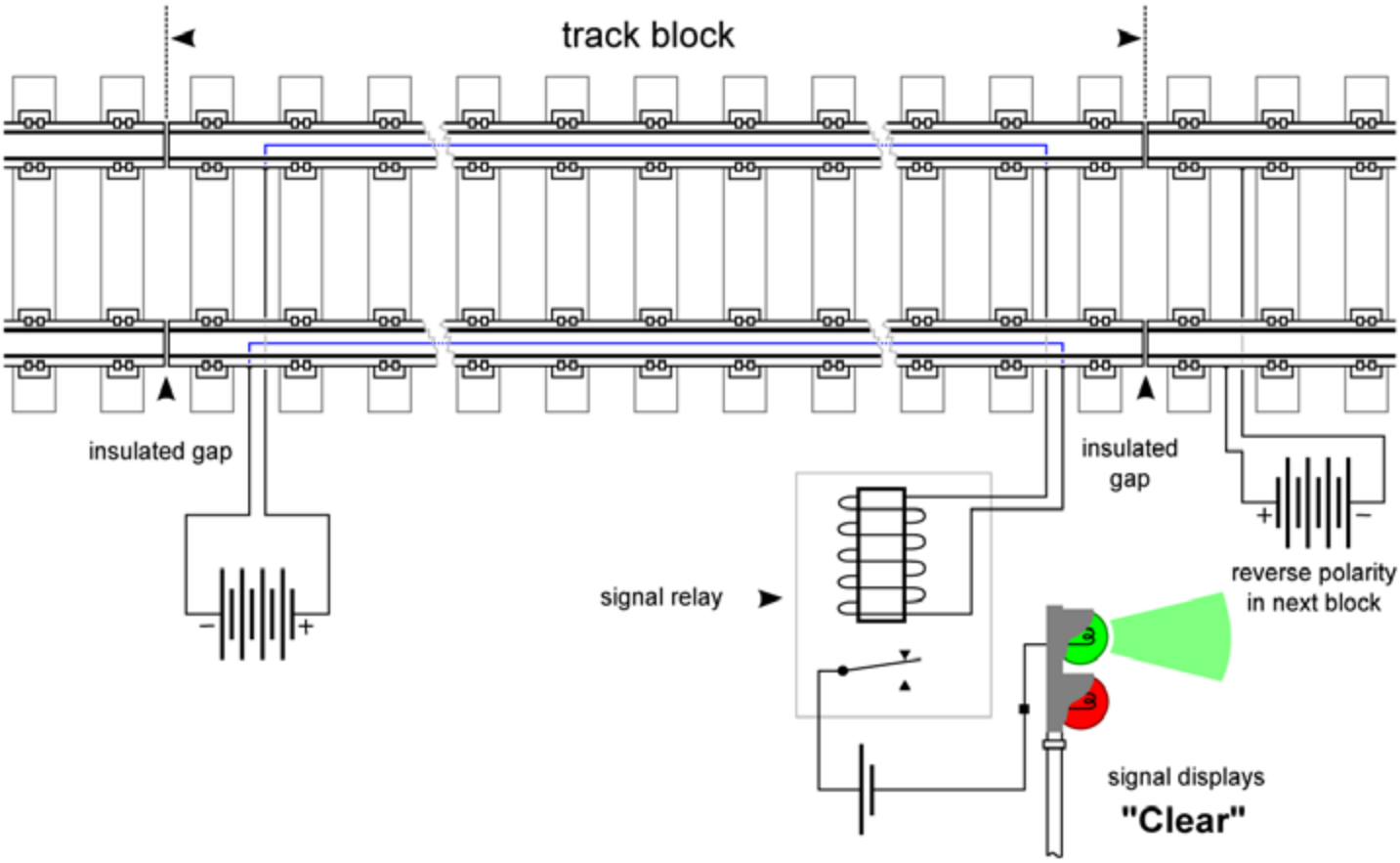


Figure 1

current is detected instead of a short.

Other circuits are used in different circumstances, such as with electrified track and with continuously welded rail. In more modern applications, AC power is used, which can have higher frequencies than typical grid power. In fact, the frequency can be modulated like a radio signal – which is how cab signaling was originally implemented.

Train detections circuits continue to be more and more sophisticated utilizing different types of circuits, lineside devices, and digital data encoding. Other systems, like wireless radio and GPS, are also part of the system today.

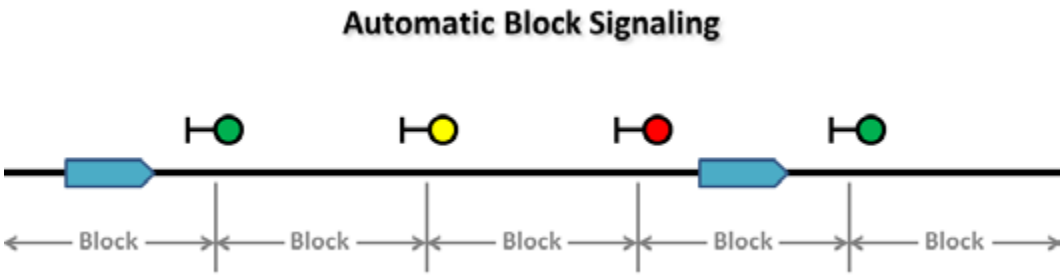


Figure 2

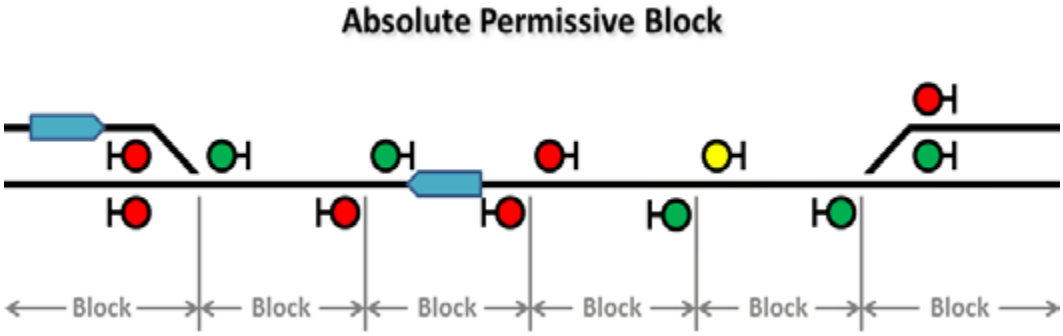


Figure 3

Automatic Block Signaling

These two tools – signals and train detection circuits – are all you need to implement a simple automatic block signaling system: the signal is red (stop indication) if the block is occupied, and green (clear indication) if the block is not.

That's not enough, though. To be more valuable, the system has to enable trains to run at faster speeds (or closer together), and needs to take flow of traffic (direction of travel, multiple routes through switches) into account. Fortunately, those concerns can be handled relatively easily.

This is the basis of Automatic Block Signaling, or ABS. ABS was invented in the United States and was first used in Massachusetts in 1871. Due to the cost of implementation, it was slow to take off but it grew in popularity during the first half of the 1900's as traffic density grew to the point where timetable and train order or other manual forms of signaling couldn't keep up.

ABS can be used in a number of ways. The simplest is on track where all the trains run in the same direction. Signals are placed at the beginning of each block. As with a simple system, the signal will be red if the block is occupied. However, if the block is clear but the next block is occupied, the signal will be yellow. This gives trains the ability to run at a much higher speed than they would be able to otherwise, since they have twice as much (or more) time to stop. See Figure 2.

In addition, switches can be integrated so that an open switch will affect the signal indication, and ABS can be combined with interlockings, crossovers and other track features relatively easily as well.

Bi-directional ABS can also be implemented, with slightly more complex circuits that control the signals in both directions. However, there is no way to enforce a flow of traffic, and it's possible that trains running towards each other could encounter a stop indication without a preceding approach indication, putting the trains at risk for an unscheduled meet. For this reason, bi-directional ABS is usually overlaid with some other form of control such as timetable and train order or track warrants.

Automatic Train Control and Absolute Permissive Block

Various hybrid approaches have been implemented to work around the limitations in bi-directional ABS. These approaches are generally referred to as Automatic Train Control (ATC), and the most popular examples tend to be a form of Absolute Permissive Block (APB).

With APB, a single track with passing sidings is signaled. Stretches of track without sidings are treated almost like a single block: if a train was anywhere in that segment, trains coming from the other direction are held short of the segment. This prevents trains from meeting head-on. See Figure 3.

This type of system has been very popular with interurban streetcar lines due to its ability to support high traffic density at relatively low cost.

Centralized Traffic Control

As the cost of implementing ABS and ATC fell, they began to be replaced with Centralized Traffic Control

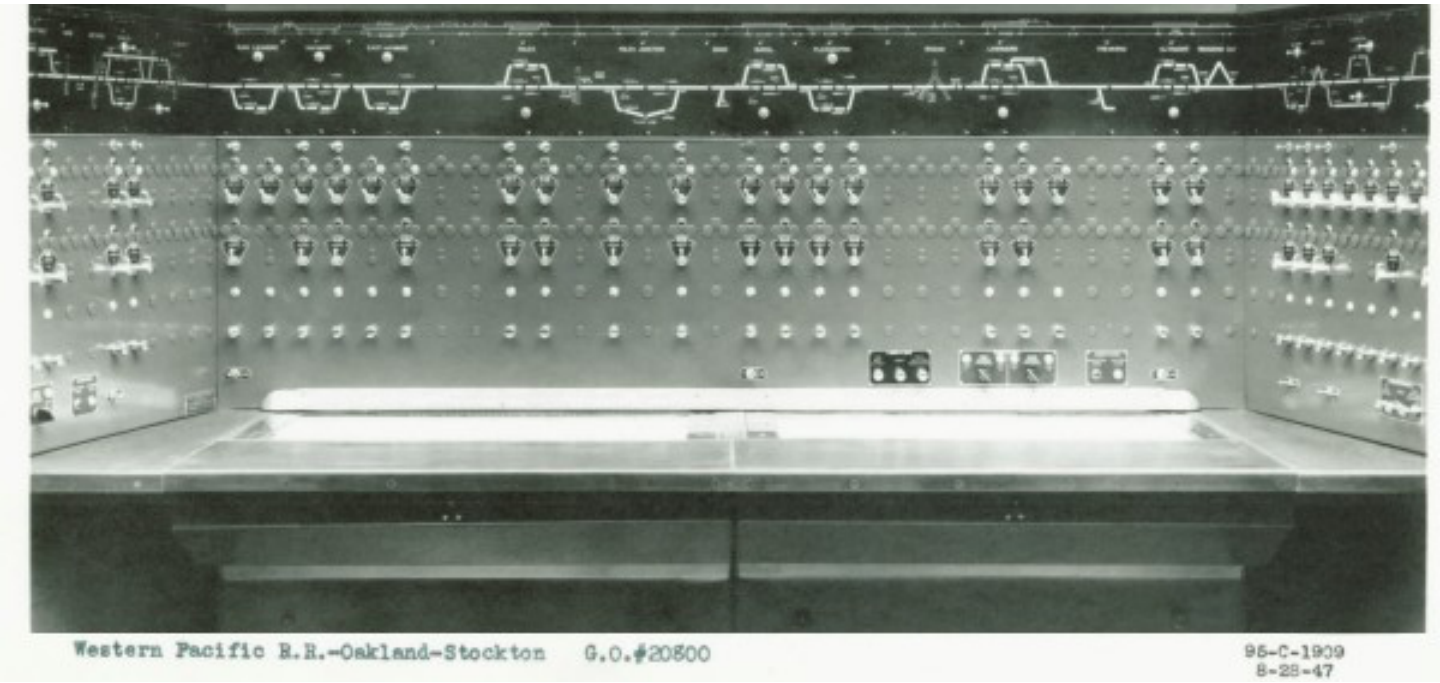


Figure 4

(CTC). CTC still uses line-side signals and train detection circuits, but introduces a dispatcher into the mix. These traffic control systems allow trains to run in any direction on any track while preventing trains from being routed into hazardous situations.

The General Railway Signal Company developed CTC technology; it was first installed in 1927 on a 40-mile stretch of the New York Central Railroad in Ohio. The centerpiece of the deployment was the CTC machine. This machine displayed the state of tracks and signals and electromechanically relayed commands to remote locations, such as remote-controlled switches. (See Figure 4.) The mechanisms were designed in such a way that the dispatcher could not issue commands that could cause a safety risk. For example, it would prevent the dispatcher from encoding a command to throw a switch if the block that included the switch was reporting as occupied.

CTC gives dispatchers the same flexibility as most manual traffic control systems before it but without the cost and complexity associated with providing an operator at each signal. However, CTC-controlled track is still significantly more expensive to build than non-signaled track. Therefore, usually only higher-density track is controlled with CTC while lower density track uses other methods like track warrants or direct traffic control.

Initially communication between the CTC machine and remote devices were accomplished with dedicated wires. Later this was replaced by pulse code systems that used a single communications link for all devices (similar to rotary dial telephones). Over time, the electromechanical machines have been replaced by solid state electronics and computers using digital communications.

In addition, while the consoles were originally installed in towers across the country, controlling only a few dozen miles of track at a time, they have been increasingly centralized and can cover hundreds of miles of track at a time. The BNSF railroad, for example, dispatches over 26,000 miles of track – most of its system – from one room north of Fort Worth.

CTC dispatchers do not determine the indication that signals will display; they (generally) only define the flow of traffic in particular blocks. So while a dispatcher may throw a switch and clear a block for movement in a particular direction, the logic of the system decides whether particular signal will show a diverging approach or a diverging clear indication to an approaching train.

In fact, in addition to the signals controlled by dispatchers (called absolute signals), there are usually additional signals on the railroad that are not. These signals, called intermediate signals, typically operate using ABS (or similar) rules.

CTC dispatchers are in contact with the train crews, either through line-side telephones or through radios (depending on the railroad and era). This allows CTC to be combined with other direct control methods, enabling dispatchers to authorize train crews to operate locked switches, to ignore signals while working in a certain area, to relay slow orders due to maintenance, and so on.

Modeling Signaling Systems

There are a number of ways to model signaling systems on your railroad. The simplest is to act as dispatcher by walking around the layout and manually

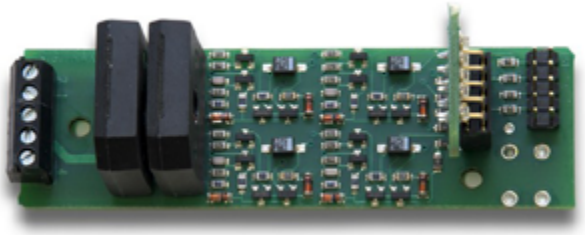


Figure 5

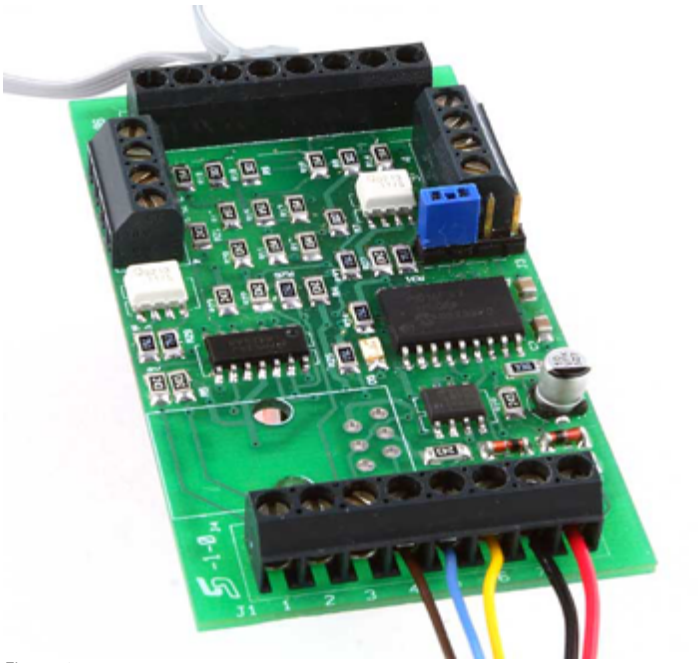


Figure 6

setting signals (i.e. by toggling a switch on the fascia near the signal); minimal wiring and no control hardware (except for a switch to control the indication) is needed. (You could also have station operators doing this who are in contact with a central dispatcher.) If fact, you can get by with no wiring at all; there are a couple modelers in the Austin are who have used colored wire nuts to represent signals.

There are a number of manufacturers who offer hardware and software to implement signaling systems. Many DCC manufacturers offer block occupancy detectors, signal controllers, and so on. Most electronic switch machines can be wired (or connected to a device) to report on which way it is thrown. You can even build the electronics yourself. There have been multiple articles in magazines like Model Railroader over the years with instructions. One of the most popular "non-commercial" systems is C/RMI, which was developed by Bruce Chubb (http://www.jlcenterprises.net/). See Figures 5 and 6.

If building ABS or ATC systems you probably won't need to interface with a computer, as the electronics can handle the logic by themselves.

However, if you are implementing a CTC system you will almost certainly need to interface your signaling system with a computer. There are several different systems out there, including JMRI (available at http://www.jmri.org/). See Figure 7.

Depending on the era you model (and the lengths you're willing to go for realism) you may be just fine stopping with computer software. However, many model railroaders go the extra mile and build (or buy) CTC machines. These range from simple consoles with

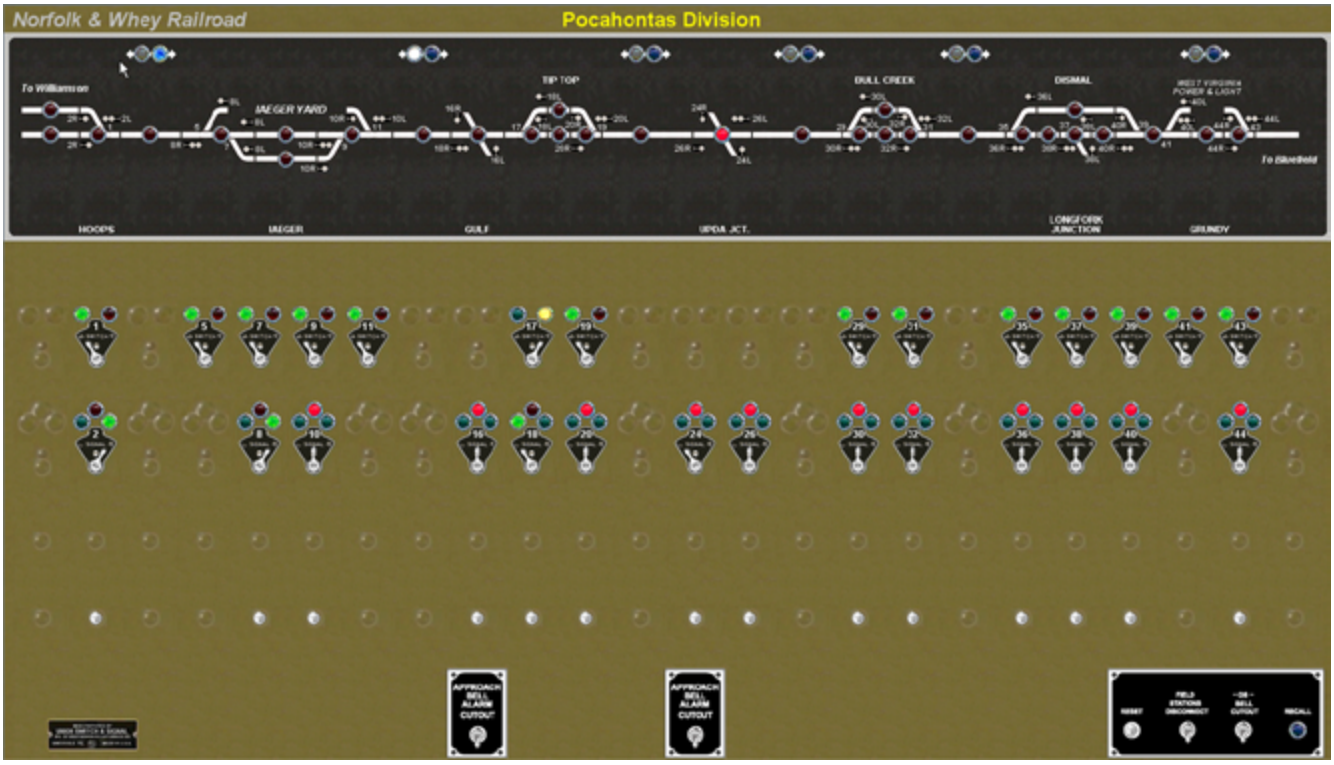


Figure 7

Figure 8 (Photo by Tommy Holt)

Figure 9

hardware that isn't prototypical but "close enough" to complex machines with real electromechanical relays and original hardware. Figures 8 and 9 show some examples (and check out http://www.ctcparts.com/engineering.htm for more). In most cases they are integrated with a computer, which is in turn integrated with the layout.

Prototypical CTC machines are very specific to the railroad and era, so it would be difficult to give a general overview of how to operate one. One example is Tommy Holt's CTC machine modeled after Western Pacific's from 1966; he's built a simple handout that explains how to use his prototypical system.

Most model railroaders will also usually utilize portable radios or a phone system when deploying CTC or using some other form of dispatcher-based control.

Wrapping it Up

It's never been easier to model signaling systems on your railroad, right down to the prototypical signals and CTC machine. If you've been thinking about it, know that it's a lot of work to wire everything and get it to work properly, but it can be well worth it in terms of the realism it brings to operating sessions.

This concludes my series on traffic control systems. I originally meant to do a short overview on the topic but that quickly grew into a year's worth of articles – and I still just scratched the surface. In the next issue of the ***Marker Lamp*** we'll talk about some other aspects of operations.

Until then, have fun! ***ML***

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https://en.wikipedia.org/wiki/Centralized_traffic_control
Realistic Model Railroad Operation, by Tony Koester
http://www.jlcenterprises.net
http://www.jmri.org
http://www.ctcparts.com
http://www.ctcparts.com/engr/wpctcinfo.jpg

Contest Winners!

The contest winners at the Daylight Special Convention:

Steam Locomotives:
1. Barry Bogs: Western Maryland Shay #6

Diesel Engines:
1. Matthew Liptak: Montana Rail Link #391
2. Steele Craver: Switcher Set

Freight Cars:
1. Don Kimmell: MDT Reefer
2. Don Kimmell: N G & P Gondola
3. Dave Lamberts: Hon3 Hanrahan Reefer

Maintenance of Way:
1. Blake Bogs: D & R G Flanger OK
2. David Lamberts: Blacksmith's Tool Car
3. Don Kimmell: N G & P Flanger

Cabooses:
1. Don Kimmell: N G & P #21
2. Don Kimmell: N G & P #20

On-Line Structures:
1. Bob Brendle: Freight House
2. Blake Bogs: D & R G W Cumbres Station
3. Dick Brannan: Steel Mill

Off-Line Structures:
1. David Lamberts: Anderson's Coal Inc.

Bridges & Trestles:
1. David lamberts: Suspension Bridge

Displays & Modules:
1. Duane Richardson: Bitter Creek Lumber Co.
2. Ken Mason: Graffiti Artise
3. Dric Hershman: Caulder Place

PHOTOGRAPHY CONTEST WINNERS

Prototype Photos – B & W Prints:
1. Judah Rice: Rio Grande K36
2. Blake Bogs: Waiting for its Turn
3. Blake Bogs: 87 at Night

Prototype Photos – Color Prints
1. Jeff Palmer: Hi!, I'm the Daylight Special
2. Sam Nicastro: #190 Whistlin' Over Dead Horse Trestle
3. Judah Rice: Mid America Car Yard

Model Photos – B & W Prints:
1. Duane Richardson: Kinsley Visits Camp 9

Mode Photos: Color Prints:
1. Lori Flom: Roundhouse Way

Model Photos: Computer Enhanced:
1. Blake Bogs: 88 Around the Bend

Photography Best in Show:
Duane Richardson: Kinsley Visits Camp 9

ARTS & CRAFTS CONTEST WINNERS
Arts & Crafts – Needlework
1. Vicki Price: Coat

Arts & Crafts Theme – Daylight
1. P. J. Mackey: daybreak on the Daylight
2. Judith Neufeld: Daylight at Sunset – Lamp

Most Popular Arts & Crafts entry:
Judith Neufeld: Daylight at Sunset – Lamp

Arts & Crafts – Best in Show
P. J. Mackey: Daybreak on the Daylight

Special Contest – Chopped - Winners
1. Duane Richardson: Bitter Creek Lumber Camp 9
2. Ken Mason: Graffiti Artist
3. Cody Akin: Bare Minimum (Score – negative infinity)
4. Case Akin: Log Cart (Score – F- (with detention)

MODEL CONTEST AWARD WINNERS
Participation:
Don Kimmell: 5 entries, 376 Points

Best Kit-Built module:
Blake Bogs: D & R G W Cumbres Station

Architecture Award:
David Lamberts: Suspension Bridge

Youth Award:
Eric Hershman: Caulder Place

Teen Award:
Matthew Liptak: Montana Rail Link SD45 #391

Most Popular Complete Train:
Loren Neufeld: Gold Creek Timber Co. Log Train

Bob Clark Logging Award:
Duane Richardson: Bitter Creek Lumber Co. Camp 9

Most popular Model:
Barry Bogs: Western Maryland Shay #6

Novice Best in Show:
Matthew Liptak: Montana Rail Link sd45 #391

Best in Show:
Barry Bogs: Western Maryland Shay #6

1ST PLACE – STEAM LOCOMOTIVES
BARRY BOGS
Daylight Express 2016

1ST PLACE – DIESEL ENGINES
MATTHEW LIPTAK
Daylight Express 2016

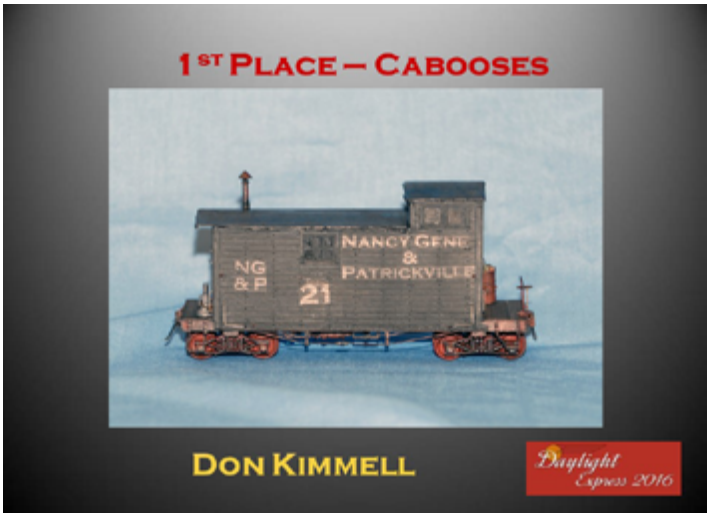
1ST PLACE – FREIGHT CARS
DON KIMMELL
Daylight Express 2016

2ND PLACE – DIESEL ENGINES
STEELE CRAVER
Daylight Express 2016

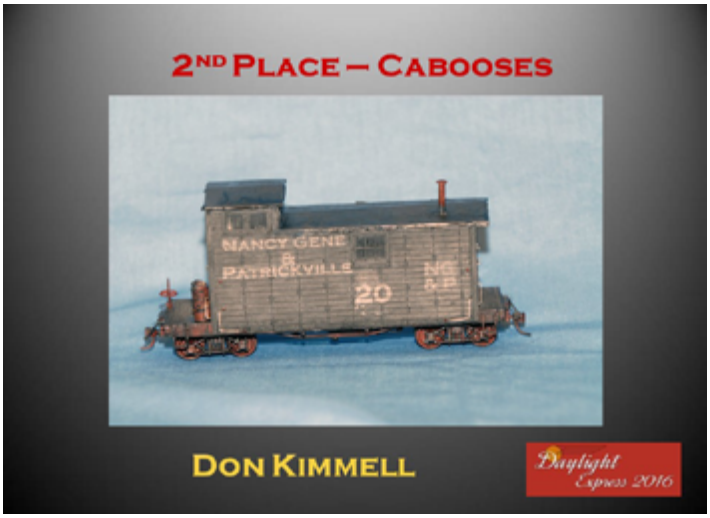
2ND – FREIGHT CARS
DON KIMMELL
Daylight Express 2016

3RD – FREIGHT CARS
DAVID LAMBERTS
Daylight Express 2016

1ST PLACE – MAINTENANCE OF WAY
BLAKE BOGS
Daylight Express 2016


1ST PLACE – CABOOSES
NANCY GENE & PATRICKVILLE
NG & P
21
DON KIMMELL
Daylight Express 2016

2ND PLACE – MAINTENANCE OF WAY
BLACKSMITH'S TOOL CAR
Daylight Express 2016


2ND PLACE – CABOOSES
NANCY GENE & PATRICKVILLE
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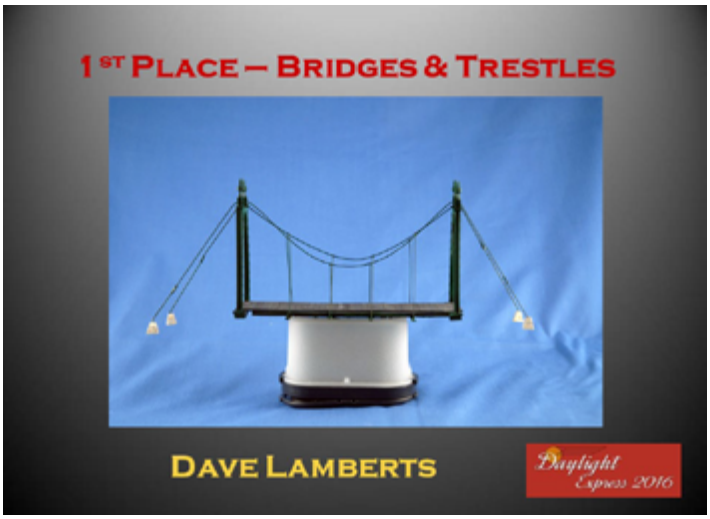
NG & P
DON KIMMELL
Daylight Express 2016

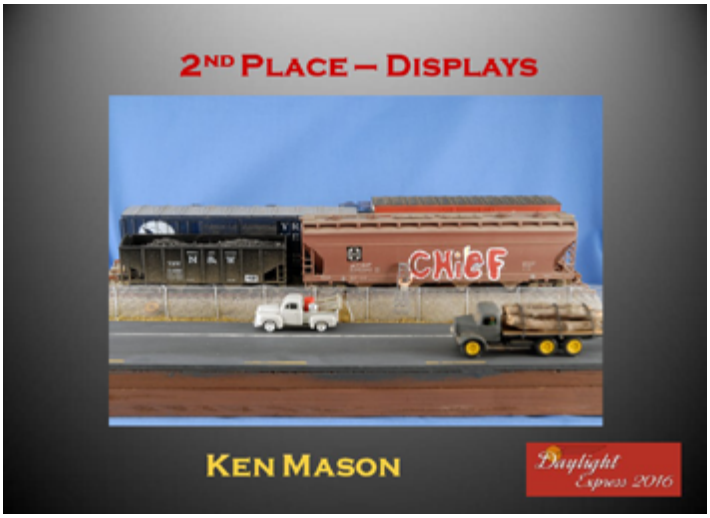
3RD PLACE – MAINTENANCE OF WAY
DON KIMMELL
Daylight Express 2016


1ST PLACE – BRIDGES & TRESTLES
DAVE LAMBERTS
Daylight Express 2016

1ST PLACE – ONLINE STRUCTURES
BOB BRENDLE
Daylight Express 2016

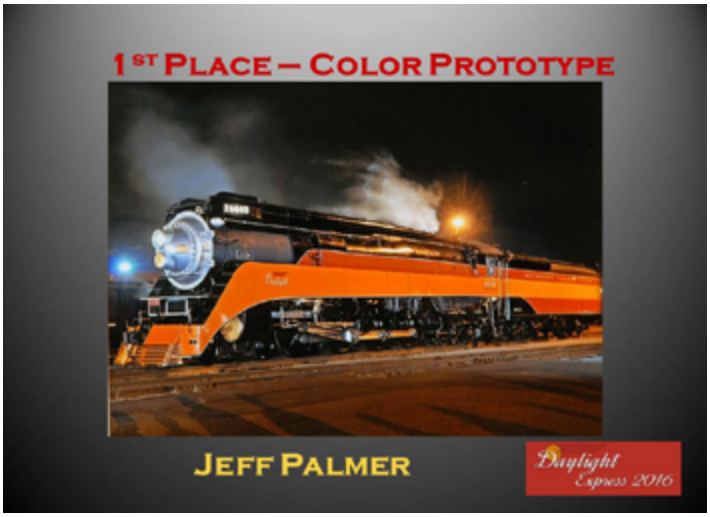
1ST PLACE – DISPLAYS
DUANE RICHARDSON
Daylight Express 2016

2ND PLACE – ONLINE STRUCTURES
BLAKE BOGS
Daylight Express 2016


2ND PLACE – DISPLAYS
CHIEF
KEN MASON
Daylight Express 2016

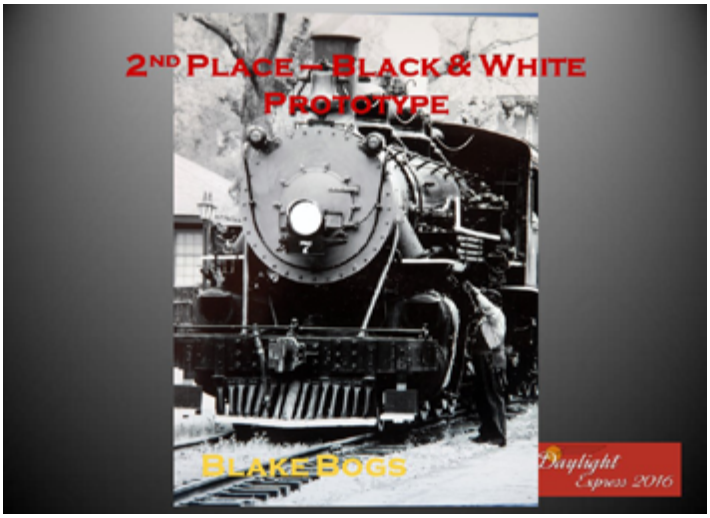
3RD PLACE – ONLINE STRUCTURES
DICK BRANNAN
Daylight Express 2016

3RD PLACE – DISPLAYS
ERIC HERSHMAN
Daylight Express 2016


1ST PLACE – COLOR PROTOTYPE
JEFF PALMER
Daylight Express 2016

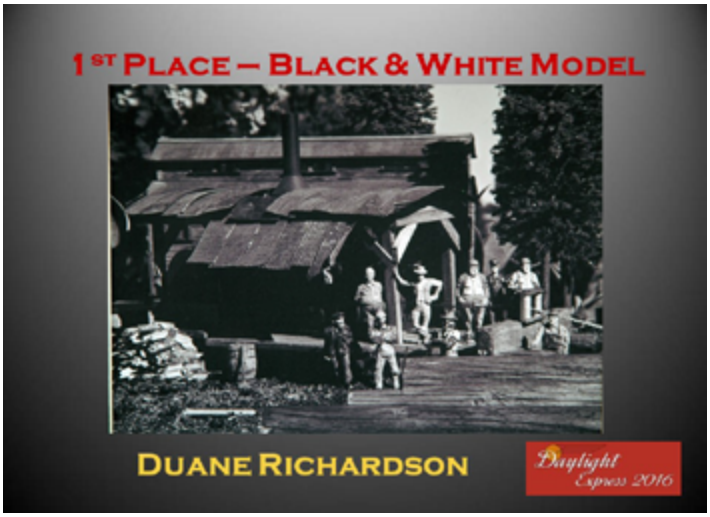
1ST PLACE – BLACK & WHITE PROTOTYPE
JUDAH RICE
Daylight Express 2016

2ND PLACE – COLOR PROTOTYPE
SAM NICASTRO
Daylight Express 2016


2ND PLACE – BLACK & WHITE PROTOTYPE
BLAKE BOGS
Daylight Express 2016

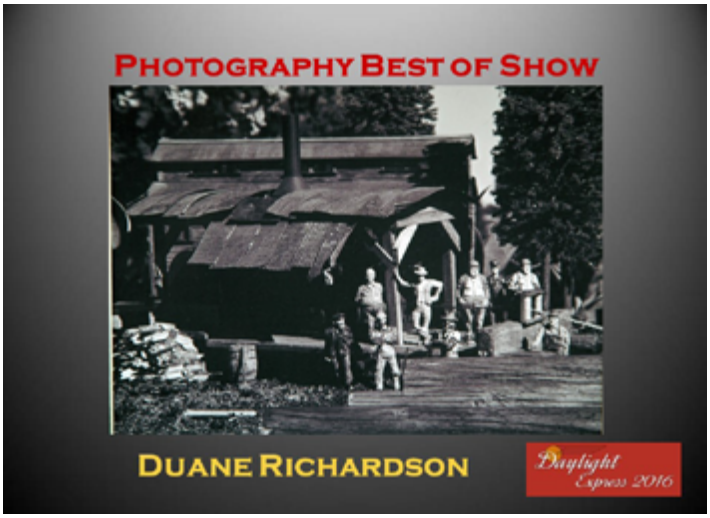
3RD PLACE – COLOR PROTOTYPE
JUDAH RICE
Daylight Express 2016

3RD PLACE – BLACK & WHITE PROTOTYPE
BLAKE BOGS
Daylight Express 2016


1ST PLACE – BLACK & WHITE MODEL
DUANE RICHARDSON
Daylight Express 2016

1ST PLACE – COLOR MODEL
LORI FLOM
Daylight Express 2016

1ST PLACE – COMPUTER ENHANCED
BLAKE BOGS
Daylight Express 2016

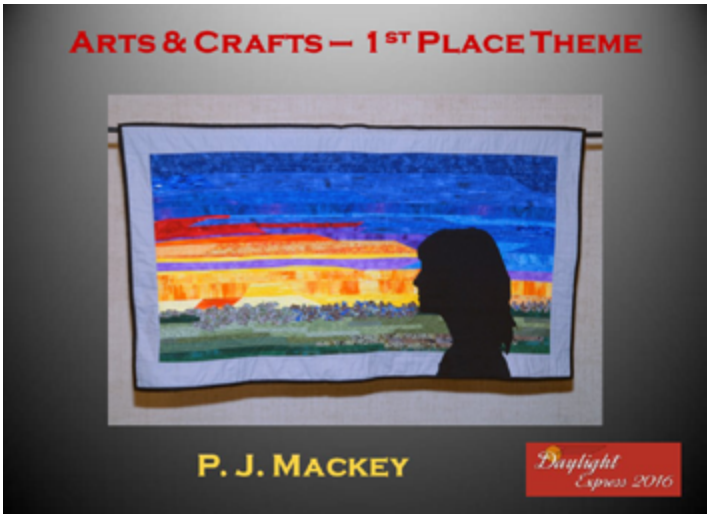

PHOTOGRAPHY BEST OF SHOW
DUANE RICHARDSON
Daylight Express 2016

1ST PLACE – OFFLINE STRUCTURES
ANDERSON'S COAL, INC
DAVID LAMBERTS
Daylight Express 2016

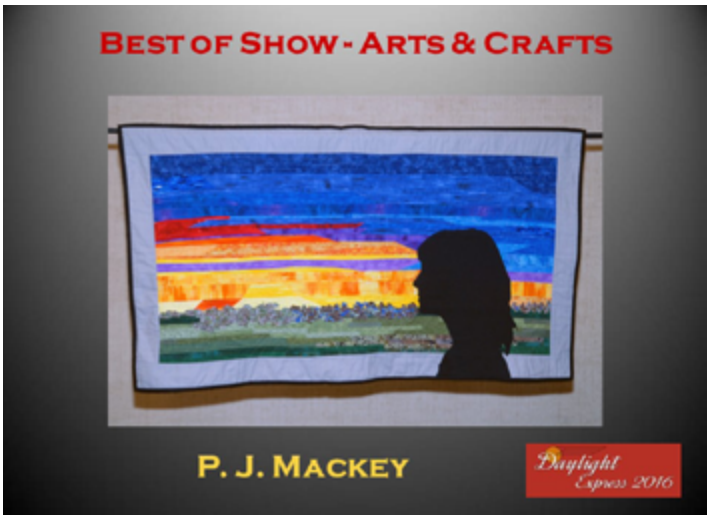
SPECIAL CONTEST – CHOPPED DEAD LAST
1st
CASEY AKIN
Daylight Express 2016

Arts & Crafts – 1st Place Needlework
Vicki Price
Daylight Express 2016

Arts & Crafts – 2nd Place Theme
Judith Neufeld
Daylight Express 2016


Arts & Crafts – 1st Place Theme
P. J. Mackey
Daylight Express 2016

Most Popular Arts & Crafts
Judith Neufeld
Daylight Express 2016


Best of Show - Arts & Crafts
P. J. Mackey
Daylight Express 2016

Special Contest – Chopped Next to Last
Cody Akin
Daylight Express 2016

Teen Award
Matthew Liptak
Daylight Express 2016

Special Contest – Chopped
2nd Place
CHIEF
Ken Mason
Daylight Express 2016

Special Contest – Chopped
1st Place
Duane Richardson
Daylight Express 2016

Participation
Don Kimmell
Daylight Express 2016

Best Kit Built
Blake Bogs
Daylight Express 2016

Architecture Award
David Lamberts
Daylight Express 2016

YOUTH AWARD
ERIC HERSHMAN
Daylight Express 2016

BOB CLARKE LOGGING AWARD
DUANE RICHARDSON
Daylight Express 2016

MOST POPULAR COMPLETE TRAIN
LOREN NEUFELD
Daylight Express 2016

NOVICE BEST OF SHOW
MATTHEW LIPTAK
Daylight Express 2016

MOST POPULAR MODEL
BARRY BOGS
Daylight Express 2016

BEST OF SHOW
BARRY BOGS
Daylight Express 2016

Mike Garber gave a clinic entitled "Developing a Paint Scheme for your Freelanced Railroad...or when is a "Dip" Paint Job not the Best Scheme" at the January 10, 2015 JRD meeting in Fredericksburg.

Clinical Awareness

by Gerard J. Fitzgerald
James River Division AP Chair (Mideast Region)

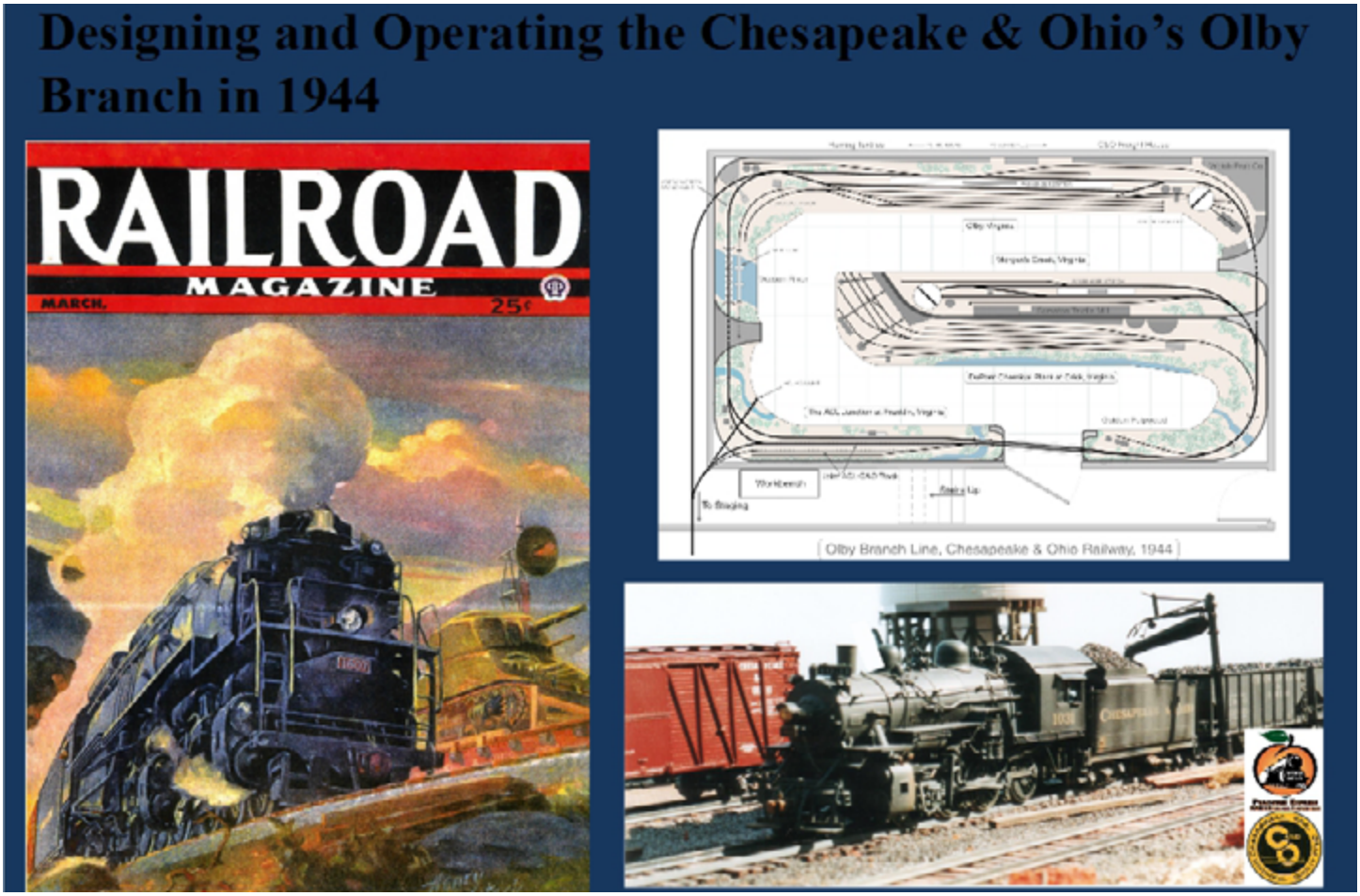
A version of this article first apeared in the June 2016 James River Division 's Crossties *newsletter*

If you have ever attended a monthly James River Division (JRD) meeting, or one of the annual NMRA regional or national meetings, chances are you attended one or more clinics in addition to going on layout tours, visiting the contest room, or attending an operating session or the banquet.

Clinics are important and essential building blocks for creating NMRA meetings and serve as a wonderful pedagogical tool for sharing information and skills about every aspect of the hobby from railroad history or scenery techniques to learning how to use a laser printer to construct specific building components from blueprints.

Many NMRA members may not know that clinic presentation is also part of both the AP Author and AP Volunteer certification process. In both cases giving clinics for the successful completion is optional and in each case is just one of in a series of possible paths a person can choose to accrue the necessary points or time units for certification. It is nonetheless something to keep in mind.

Much like other skills in the hobby, giving a clinic is something most people learn to do building upon past experience. Over time, with repetition and careful attention to detail and fine-tuning the better the overall result for all concerned.



These clinics by the author have been given at NMRA national meets and also in some form at either division or regional meets.

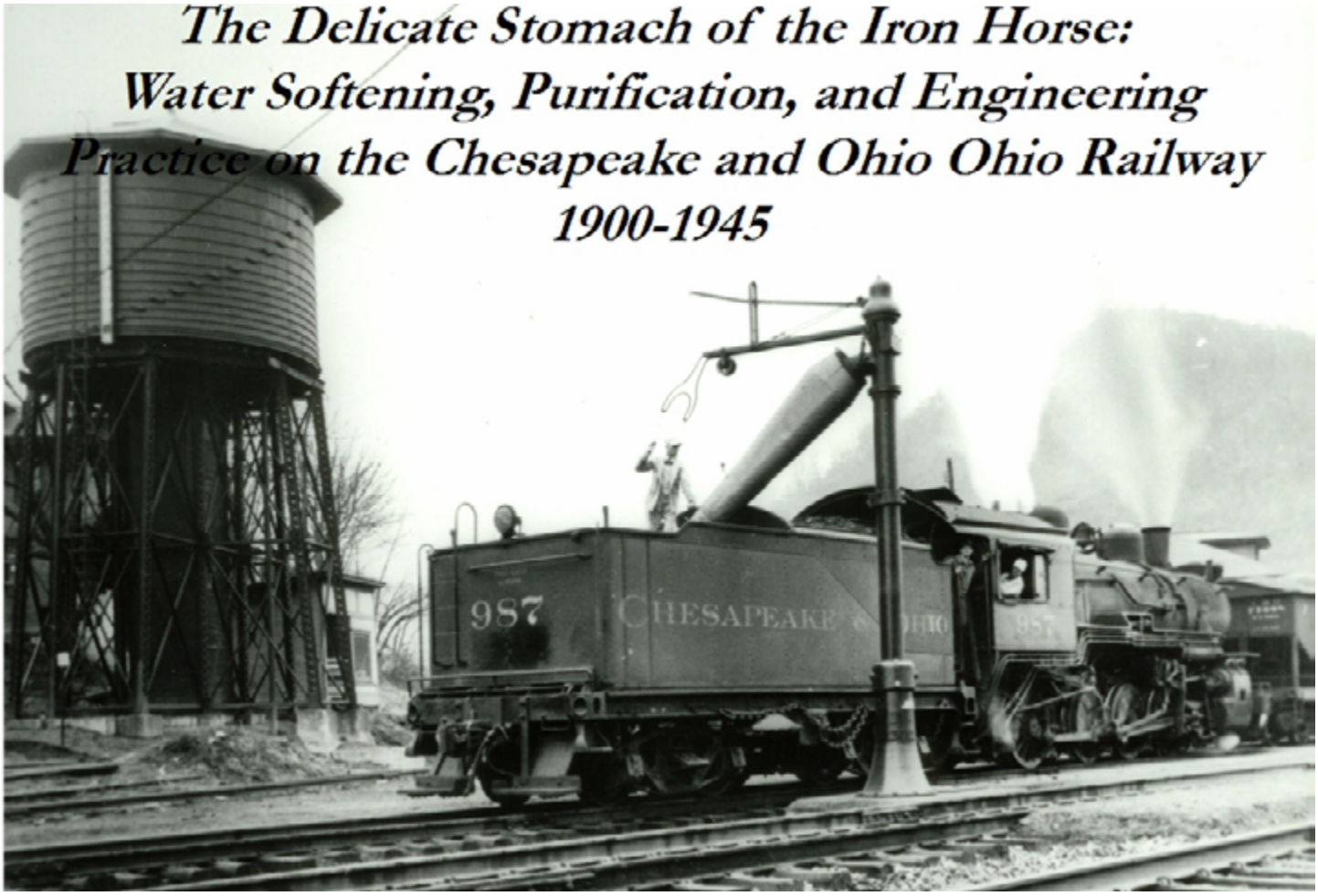
The people who give these presentations, the clinicians, are usually just average NMRA members who got caught up in a project and decided for whatever reason to write it up and prepare a presentation to share what they learned from their experience with other model railroaders. Or s/he might be writing up a blog post or an article on a project and as a result has a PowerPoint version of their work available that summarizes their project and can be reworked in presentation form. Depending upon the venue you might get to see hobby super stars like Tony Koester or Allen McClelland give a clinic at an NMRA meeting although chances are the clinician speaking about Topic X is probably someone you have not heard of… but who nevertheless knows a great deal about the subject at hand and is well worth your time and attention.

So where do these people who know so much about signals, milk train consists, sound chip installation, layout design, dry paint brush techniques, DCC, etc… come from? Well, if you are still reading this column feel free to go find a mirror and you will have your answer. That is because every member of the JRD is a potential clinician. Some of us have been in the hobby for decades, others for only a few years, some might be relative newbies, and the rest fall somewhere in between.

Regardless each of us has something to contribute. You might even be new to model railroading but have skills from other hobbies such as military modeling and know a great deal about painting and weathering and can share those "new" techniques, which might be obvious in other parts of the hobby world, yet still haven't made it into model railroading circles. No matter how long we have been around the hobby each of us accumulates over time a unique skill set and knowledge base that make us the model railroader we are today, which means that all of us has some insight, information, or possibly a new or improved technique about the hobby that might make for a fun and informative presentation that could help others understand more about a particular aspect of model railroading.

Giving a clinic is also a great way to meet other modelers and also teach yourself what it is you thought you knew in the first place. Until you can clearly explain something to a captive audience you probably really do not understand the subject yourself, or at least not as well as you might think.

For the record I have been giving clinics about topics related to the historical evolution of Chesapeake & Ohio Railway, locomotive steam technology, railroad architecture and race, layout design, and the relation-


The Delicate Stomach of the Iron Horse:
Water Softening, Purification, and Engineering
Practice on the Chesapeake and Ohio Ohio Railway
1900-1945
987

These clinics by the author have been given at NMRA national meets and also in some form at either division or regional meets.

ship between war and railroads for many years and have usually –but not always- enjoyed the experience. Interruption by audience members in the form of unwanted questions, occasional heckling, speaking to other audience members loud enough to cause interruptions, and general bad behavior has been on the rise in the last decade, -and do not get me started on cell phones!- a phenomenon that has not made it easy for clinicians to give their presentations.

Regardless of how much an audience member feels the need to share their knowledge about the topic it is always up to the clinician to set the tone of their presentation regarding questions and interruptions.

Some clinicians like to have a dialogue with the audience, while many others do not. If a speaker prefers to hold off answering questions until the end of the formal presentation it is best to be polite and follow their wishes. This works for all involved. If you really have a great deal to contribute about a clinic topic please put together your own presentation as I am sure people would be interested to hear your thoughts.

Sadly audience behavior at JRD meetings could be better on occasion. If nothing else it is important to always refrain from speaking during a clinic. Should you feel the need to have a chat with a friend during a clinic please move outside the presentation room as that will be better for the audience and the speaker. For an interesting take on the decline of etiquette among model railroad audience see the following blog post by Marty McGuirk. http://centralvermontrailway.blogspot.com/2014/01/clinic-etiquette.html

My interest in clinics began not at NMRA meetings but at various RPM national meets back in the 1990s. One of my first clinic presentations was at the Napierville meet outside of Chicago back when that gathering was THE RPM meet in the country. At the time giving a clinic there was like being called up from the minors to pitch at Yankee Stadium. I was probably in over my head but I was too nervous to say no and went anyway.

Things went surprisingly well out in the Midwest and more importantly I was lucky enough to become friends with freight car modeling royalty like Ted Cullota, John Golden and the Rev. Bill Welch. Unfortunately, none of their modeling skills rubbed off.

Eventually I started giving presentations at my local NMRA division in Delaware and also giving talks at

the Philadelphia/Pittsburgh RPM meet and occasionally at the annual meeting of Chesapeake & Ohio Historical Society. In time I also eventually gave clinics at NMRA regional meets and two NMRA national conventions.

Let me note for the record that for whatever reason I have never been invited to give a clinic at an NMRA function at the regional or national level and have always had to volunteer my services. This sometimes takes a great deal of work with numerous e-mails and phone calls, and can even lead to the occasional outright rejection.

That was certainly the case when I first joined the JRD and has happened elsewhere. While doing the necessary legwork to get on the program is worthwhile, the process can be very frustrating at times and is something for potential clinicians to keep in mind. I would keep contacting people until something is set up. This has not been the case in RPM circles as those clinic staffs tend to be steady from year to year and the various meets seem more willing to seek out potential new speakers. Your mileage will no doubt vary.

In theory, as often as not in practice, the more clinics you give the easier the process becomes. After giving a presentation once or twice a clinician usually finds out what approach works best, which themes and images are the most clear and useful for reaching the intended audience, and what thoughts and slides are best left on the cutting room floor. The best advice I can give potential clinicians is first, know what you are talking about and second be confident about your approach to explaining your topic. Perhaps the most important aspect of clinic preparation is PRACTICE. Let me say again: PRACTICE, PRACTICE, PRACTICE! Unfortunately this type of preparation, which may seem obvious, is not something that everyone does which sometimes leads to serious time management problems.

When a speaker in unable to finish their talk within the allotted time, or worse yet, goes over time and possibly disrupts the schedule, the result reflects poorly on the speaker, disappoints the audience, and in some cases takes time away from other clinicians. It is really imperative to practice your presentation once or twice in its entirety, with a timer, with one or more audience members present. Having an audience, even if only one person –which includes non model railroaders who often make the best audience- is useful way to be sure that your clinic is within the allotted time.

Just as important, an audience member willing to give feed back after a trial run will allow you to gauge whether what seems clear and obvious to you and is also clear and obvious to them. If you practice a few times you will often be surprised how much you learn about the topic you were quite sure had already been mastered.

Finally, remember to leave time for questions and remember not to get bogged down on a particular slide or get side tracked by any boorish members of the peanut gallery. Also remember to prepare a handout of some sort, as that is necessary for AP certification.

Having said all of this… not everyone has the desire to prepare a detailed presentation, not to mention the more daunting task of later getting up in front of a room full of other modelers and giving a talk for somewhere between 30 and 45 minutes. Some people have an aversion to public speaking, or might even be terrified of doing so, and that is fair enough: Giving a clinic is not for everyone. However if you have never given a clinic, or have not done so for some time, you might want to consider putting together a future clinic on a topic of choice for two reasons.

First, the JRD is now meeting four times a year and we need at least one clinician per meeting, preferably two, and we need bodies. We have been privileged in the last year or so having NMRA members from other divisions stop in to share their expertise, a tradition that we hope and need to continue to do. However the JRD is always looking for local members to step up to the plate and take a swing. Each meeting is by definition a voluntary collaboration and we need each other to make things work.

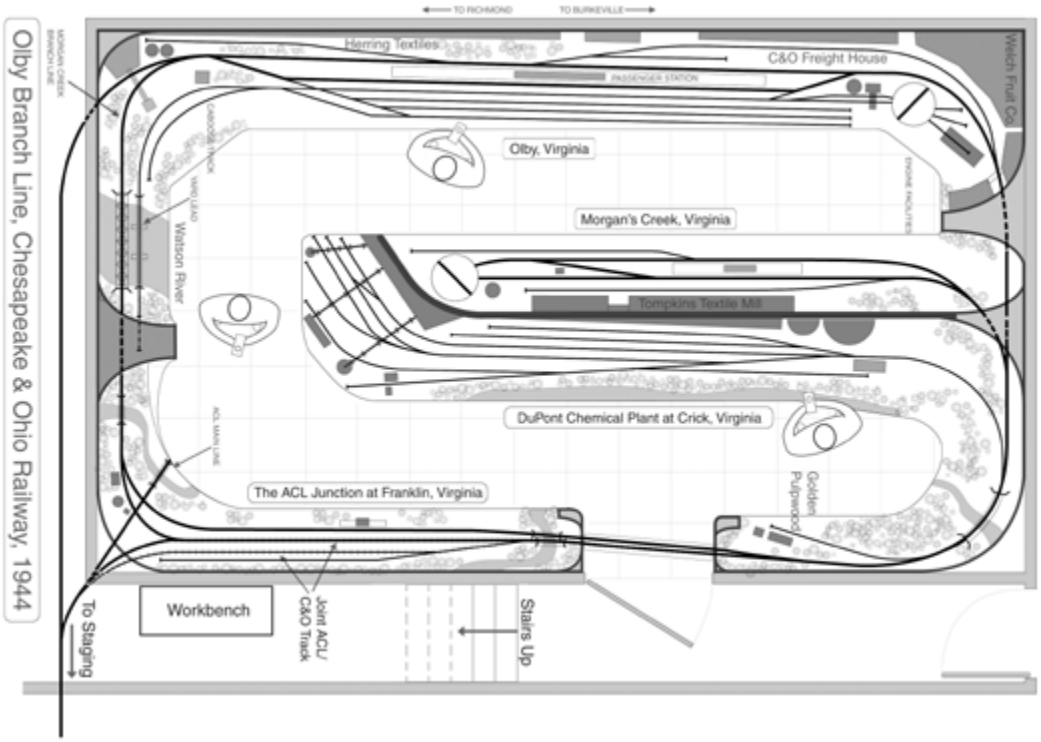
Second –wait for it…here comes the AP section- giving a clinic has purchase in both the AP Author and AP Volunteer categories and can help you achieve one or both of those certificates depending upon how you approach things. You do not HAVE to give clinics for either AP certificate but you can certainly do so in either category to accrue points.

So how does this work?

To make a long story short, points may be earned through published articles, clinics, instructional multimedia, and electronic publications such as blog posts- one way an NMRA member can approach part of the author qualification involves giving clinics at either division, regional, or national meetings.

The NMRA AP Author rules state that: "In order to be eligible for credit, the clinic must be prepared and presented by the member applying for the certificate, it must be at least 30 minutes in length, and it must include a handout (a copy of the handout must be included with the certificate application.)" The guidelines further note "a live clinic can only be claimed for Model Railroad Author points once, even if it presented more than once. Additional presentations of a clinic earn credit towards Association Volunteer."

What that means is if you give a clinic more than once, you can accrue points, in the form of time units, for the Association Volunteer. Both AP Author and AP Volun-



Clean graphics help communicate your message more clearly and are more enjoyable for the audience.

teer have a hierarchical scale based on venue which oddly enough gives different value for the same exact clinic depending upon whether it is given at say a divisional meeting or the summer national.

Regardless, if you are interested in either Author or Volunteer, giving clinics is a useful way to garner points for both certificates. See the tables for point scores. Note that AP Volunteer is based on times units while author has a more traditional and obvious point value system.

Finally, giving a clinic at certain venues usually comes with automatic paperwork recording the date for posterity and giving you a certificate to keep as a token of appreciation. The key for record keeping is to scan the certificate, or at least put the paperwork in a binder for future reference, to keep track of your progress. At the division level certificates are not normally handed out although some divisions do so. At the regional level, here in the MER for instance, I received a very nice personalized certificate at the meeting in Washington DC a few years ago that clinic chair Marty McGuirk handed to me the day before I even presented. At the Hartford National NMRA meeting I got a certificate in a very high-speed cardboard frame/folder, which is where I now keep all my other NMRA certificates and prizes.

Unfortunately, the NMRA national is no guarantee of a clinician receiving onsite paperwork. At the Atlanta national in 2013 I gave three different clinics and only many weeks later got a rather mundane e-mail from the convention clinic chair with a link to print out some paperwork myself. So you never know.

On the bright side those three clinics gave me a nice point total and started me on the road to AP Volunteer, which remains a work in progress.

Regardless of certificates, I urge all of you that are still reading to think about putting together a future clinic for the JRD. It does involve some serious work, much like everything else in the AP program.

What is nice is once you start giving clinics at the local level you can start to give presentations at other locations an perhaps at regional RPM meets. Best of all you really do learn more about your subject, which in turn makes you a better modeler. ***ML***

Points Earned For Live Clinics for AP Author

Item	National	Region	Division
Given At NMRA Sponsored Events	6	4	2
Given at NON-NMRA Sponsored Events	3	2	1

Points Earned For Live Clinics AP Volunteer

Item	National	Region	Division
Associate Volunteer Points	3 time units	2 time units	1 time unit

NOW AVAILABLE!

Color

Pike and Dealer Ads

Pike and dealer ads are now available in color for the same price! Share your railroad or advertise your business to others while supporting the Lone Star Region.

- **Do you have a herald for your railroad?**
- **Is there a unique feature?**
- **What is the name of your hotshot freight or crack passenger service?**

Let everyone know about it with a color ad!

Pike ads are $8 per year and dealer ads are $20 per year.

Checks should be made out to:
LSR NMRA

Then send to:
Donna Orr
2625 Rolling Meadows Dr.
Rockwall, TX 75087

Ads can then be sent as a JPG file attached to an email to:
rileytriggs@gmail.com

ATTENTION!

NON RAILS

PLAN NOW TO ATTEND

2017 HOUSTON BAYOU CITY CONVENTION

Lots of plans are in the making for a fun packed time!!!

New ideas never done before at a Houston LSR convention!!!

START WORKING NOW on an entry for the

ARTS AND CRAFTS CONTEST:

THE THEME IS

BAYOU CITY

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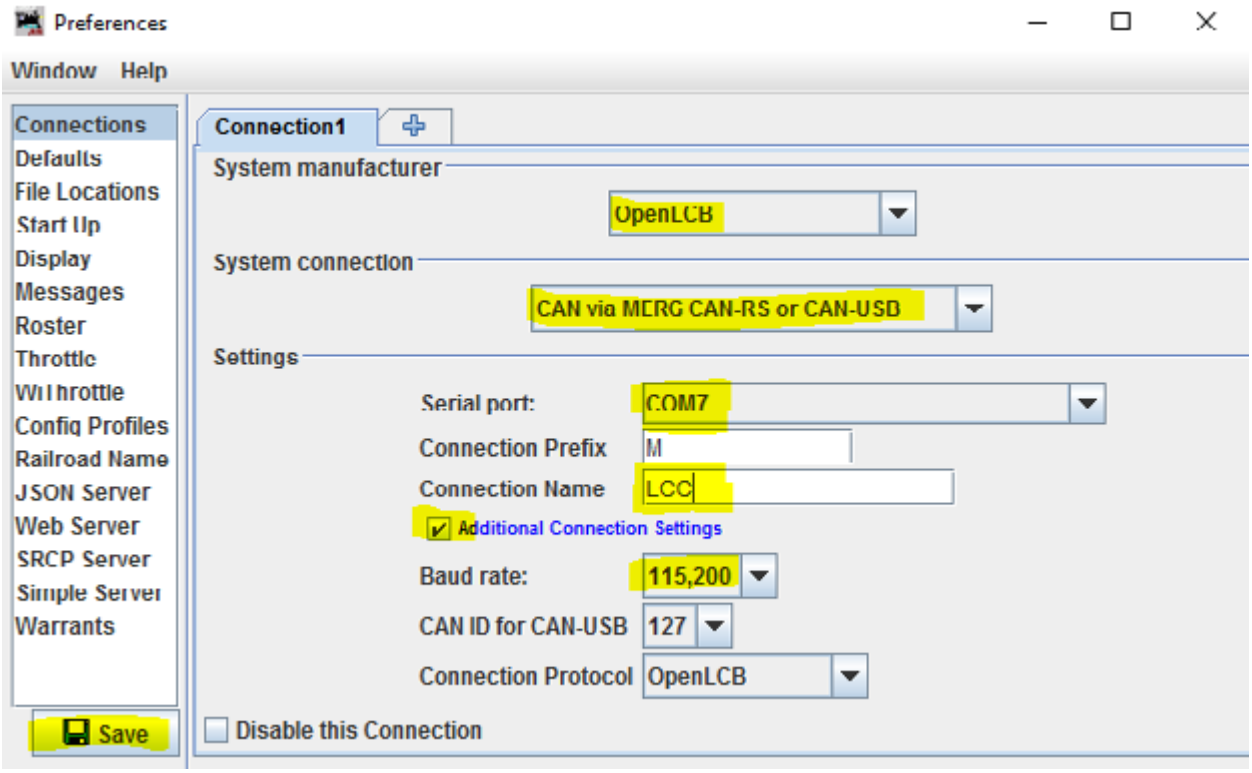


Fig 1 LLC preferences connection setup

Arduino

Controlling 4 Servos this time with JMRI

We are going to use JMRI (4.4 is the latest version from http://jmri.org/download/index.shtml) to change 4 turnouts (servo motors in this case) by using messages sent using the new NMRA standard called LCC (Layout Command Control).

Now, of course, disclaimer next...we are not going to build a real LCC node here, since that is just a little more than one article, plus, you might want to know a little bit more about how many messages your whole layout might be sending and receiving, before you pick the Arduino's Atmel Atmega328 processor to decipher them all. For more information about LCC, please read this MRH article: http://mrhpub.com/2015-11-nov/port/files/45.html, this NMRA

released FAQ: http://www.nmra.org/sites/default/files/standards/lcc_faq_handout.pdf and everything on this website: http://openlcb.org/. The whole standard is also available on the NMRA website, under standards as 9.7.

The basic idea behind a Producer/Consumer model as used in LCC and MERG CBUS, is that anything that can produce an event, like when a train shows up in the siding at the station for example, the sensor in that block produces an event and sends it to everyone on the bus. It is up to the consumers, the signals on either end, the computer running JMRI and the turnouts in staging to decide what to do with that information or message. Of course the turnouts are not going to bother themselves with a message like this, JMRI might show the block occupied and the signals might show a red "stop" aspect for incoming trains. Since we are going to use the CAN bus, a Bosch invention happily up and running every time you start the vehicle in your driveway, you have not much choice but to accept that every node (or board) on the bus will see every message.

RS232 in its basic form is point to point and RS485 can connect more nodes, but one needs to be the master to control the traffic on the bus. Ethernet has carrier sense multiple access with collision detection (CSMA/CD), allowing many devices on the bus who can talk when they want (so every one is a master), but with collision detection, so both talkers can hold off a random time when they sense it. But, of course, you need the more expensive ($-wise) TCP/IP stack to be implemented in your design, and since we are not using coax any more, you would also need a hub or switch to connect all the nodes to each other.

The CAN bus is a **multi-master serial bus standard for connecting nodes**. All you need is a twisted pair (CAN-HI and CAN-LOW) and a ground wire to connect one board to the next. Each node gets a unique ID, setting its priority on the bus (so only the other guy with the "less important" priority has to back off, you keep talking) and the protocol includes all the CRC (checksums) and ACKs (acknowledgments) that you need to add to RS232 and RS485 yourself to make it awesome. Also built in are features like sensing when something goes bad, retrying messages, and forcing yourself to only listen or electrically removing yourself from the bus (while physically still connected) when things really goes bad. Something you need to remember, the CAN bus needs at least two nodes to function, if one sends a message, another one has to acknowledge (ACK) it, else the sender will keep trying to retransmit and eventually complain about the bus. This is a little different than RS232 where a sender by itself can keep sending without caring if the other gets it. Of course, using the simplest 3 wire implementation, not using the extra wires for Data Terminal Ready, etc., etc.

Back to business, first you need to make sure that you have a somewhat newer JMRI, I am using the latest version 4.4, (with the required Java 1.8, (*On Windows 10, I had to use Internet Explorer 11 to uninstall all the older Java versions as well, before 4.4. even attempted to install)*. With an Arduino Nano plugged into your computer, you start **PanelPro** up, go to **Edit ->Preferences** and select as a new Connection:

OpenLCB as *System Manufacturer* (the name of the group of brains behind LCC)

CAN via MERG CAN-RS or **CAN-USB** as *System connection*...(because I know this one will work)

COM7 as *Serial port* (but use the COM port that your Nano is connected to instead)

M as *Connection Prefix* (or anything else you like, knowing that your turnouts'

system name will start with this. Those who already know JMRI: N is used for NCE, L for Loconet (Digitrax), etc.)
`LCC` for *Connection Name* (the "Connection1" in the tab name will be replaced with this)
Check the *Additional Connection Settings* box, so that you can change the Baud rate to `115,200`.

Of course, `Save` in the bottom left and JMRI will prompt you to `Restart`.

See Fig 1 LCC Preferences->Connection Setup

So, while we have the software open, let's go ahead and quickly create our 4 turnouts in the Turnout table, so we can get to the electronics and code. From the main **PanelPro** window, **Tools ->Tables ->Turnouts**, click `Add...` in the bottom to bring up the **Add New Turnout** window. Please ensure the System Name shows `OpenLCB`, since we don't need to type the **MT** any more (**M** for the Connection Prefix we selected in Preferences, and **T** for **T**urnout).

However, since we are not building a true LCC node with our Arduino Nano, we are just going to get a little creative with the Hardware Address here and come up with our own 64 bit address or event number for Throwing and Closing the turnout. The powers that might be, could get very upset here, but we will simply claim we are experimenting! So, what we need is an event number (64 bits) for when the turnout is changed to be **Thrown**, a semicolon and another 64 bit number for when the turnout is changed to **Closed**.

The LCC standard, S-9.7.0.4 shows that we could use a 6-byte Uniquely Assigned Node ID and a 2 byte Suffix of our choice for the event:

5.1 Node ID Based

Value						Suffix		Description
Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8	
6-byte Uniquely Assigned Node ID						*	*	Assigned Node ID event

Fig 2 NMRA Standard S-9.7.0.4 Node ID event

And S-9.7.0.3 shows that we can use our NMRA Membership number to have something unique (but, if you promise to never have your node get in contact with my node, then I'll use your Membership ID too of `01.02.03` in Byte 3, 4 and 5):

5.5 Self-Assigning Groups

These Unique Identifiers are assigned in association with an outside organization's unique identification scheme. The outside organization is responsible for assigning a globally unique identifier that maps into the OpenLCB Unique Identifier space designated in the table below. Future definition of ranges for additional groups will use unique values in Byte 2.

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Organization	Comment
03	00	Membership Number	*			NMRA	NMRA members may, but are not required to, use their NMRA membership number to self-assign Unique Identifiers. The least significant byte is self-assigned.

Fig 3 SNMRA Standard S-9.7.0.3, showing use of your Membership ID for Assigned Node ID

And the way it is entered into JMRI for a Turnout Hardware Address would then follow this:

3.0.1 . 2 . 3.x.y.z;3.0.1 . 2 . 3.a.b.c

where we pick x,y,z and a,b,c. So to keep things a little bit organized, we use a and x = 2 (imagine 2 for turnouts), y and b to some imagined turnout number, and z and c to be the same imagination station assignment for **Thrown** (0) and **Closed** (1). Another warning, these numbers are just for our use, don't tell anyone else. :)

We create 4 turnouts in JMRI:

3.0.1.2.3.2.1.0;3.0.1.2.3.2.1.1 as Turnout 1 (press OK)
3.0.1.2.3.2.2.0;3.0.1.2.3.2.2.1 as Turnout 2 (press OK)
3.0.1.2.3.2.3.0;3.0.1.2.3.2.3.1 as Turnout 3 (press OK)
3.0.1.2.3.2.4.0;3.0.1.2.3.2.4.1 as Turnout 4 (press OK,
and then the X in the top right corner)

Fig 4 ***Creating Turnouts: Event;Event***

Again, nothing too much here, except that every 64-bit event number is unique to at least your layout. By using 3.0. and your own ID in front, you will never buy any other LCC product conflicting with your messages!

So, now you have a table of Turnouts that looks like shown below and you can click on the initial **Unknown** button to toggle between **Thrown** and **Closed** for each Turnout.

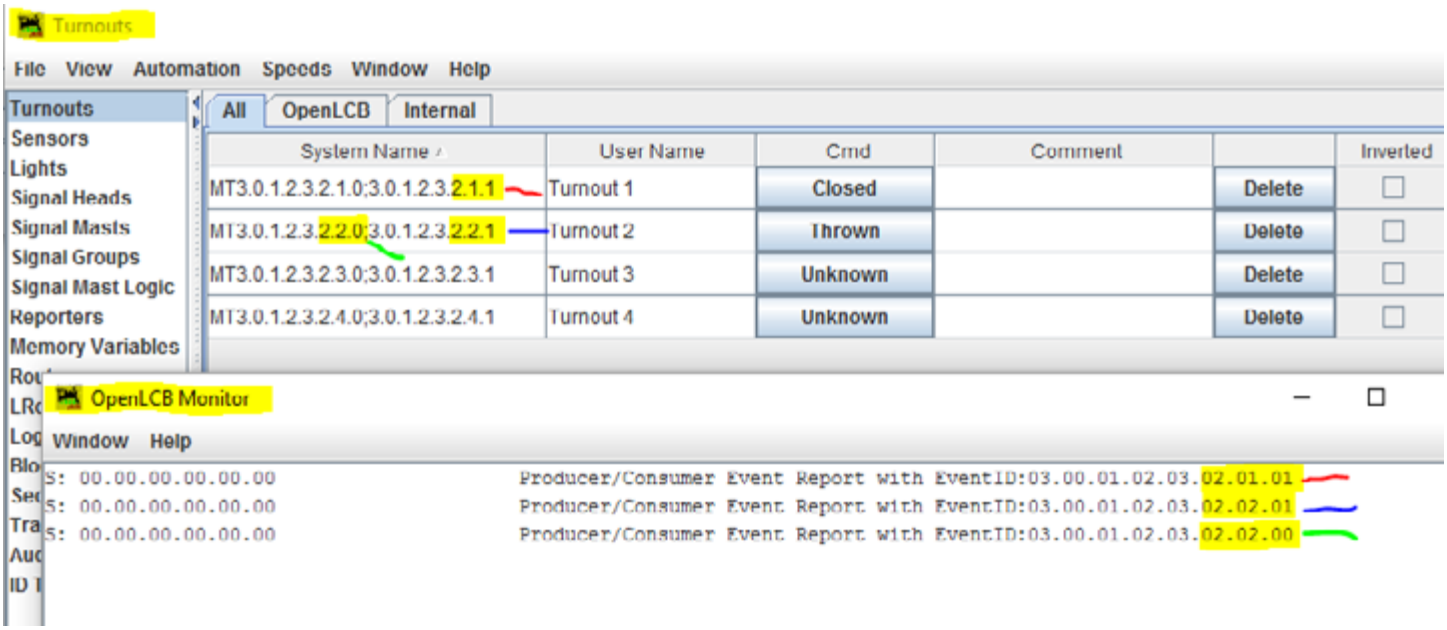


Fig 5 Turnout Table and LCC Monitor

And from the **PanelPro** main window, you can use the **LCC ->Traffic Monitor** to see how the messages are sent as you change the Turnouts in the table, as shown in the Monitor above. I clicked on the button in the Cmd column for Turnout 1 to be **Closed**, then on Turnout 2 to be **Closed** and the Turnout 2 again to be **Thrown**. And as you can imagine, these messages are being sent to your Nano on COMx and all we are going to do is send it over the CAN bus to the other Nano to move the servos accordingly.

Don't get too confused about the Producer/Consumer model here, but when you use JMRI to change the turnout, you are simply sending an event out on the bus, as if you are the Producer. The Nano on the other end of the CAN wire will see each message and act as the Consumer!

Good point to save your work here … there is a place to save from the Turnout window under its menu for **File -> Store ->Store Configuration and Panels to File...** , but since you are using **PanelPro** and there is only one place to load your data file and that is from the main window under **Panels ->Open Panels...**, I would encourage you to save it from **Panels ->Save Panels...** too. One small detail, you might have many panels, and at the same time have hundreds of Turnouts, Sensors, Signal Heads and Logix, they **ALL** get saved into the **same .xml file.** Save **often** using **different file names**, so you don't overwrite your good data with mistakes. I like to use `YYYYMMDD_HHMM_Layout.xml`, to keep the files in alphabetical and chronological in order in the folder, example: `20160714_2103_MarkerLamp.xml`. The **undo** button also does **not** exist in all the parts of the software yet, again, save often.

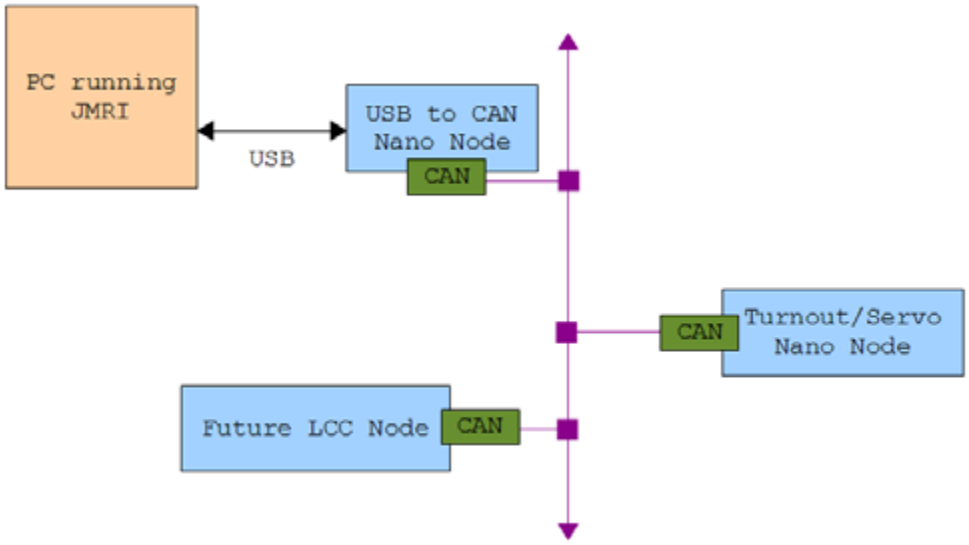


Fig 6 Block diagram with CAN Nodes connected to the bus, up to 110 devices easily. The PC with JMRI will use a Node to connect to the bus.

Shown above is an example of your computer (anything like a PC, Windows, Linux, MAC or Raspberry Pi) running JMRI, with a USB cable to the first Nano. It in turn will connect to the CAN bus with all the other nodes. Then there is our second Nano with the Servos, as well as all the Node expansions you might add in the future.

Fig 6 SPI CAN Transceiver, for next article

From the last article, did you buy at least 2 SPI CAN controllers? If not, search for "MCP2515 CAN SPI Module Arduino", at Ebay for about $2.16 today. You'll need 2 to get started, since your computer Node needs one too. For every future module you add, you would only need another one. The module comes with screw terminals for the CAN-H and CAN-L wires, but we need to wire a GND connection along too, as shown later.

Let's connect the CAN modules to the Nanos as pins 10-13 were set aside for this purpose. The CLOCK, CS, MOSI, MISO, 5V and GND connects as show in the schematic below:

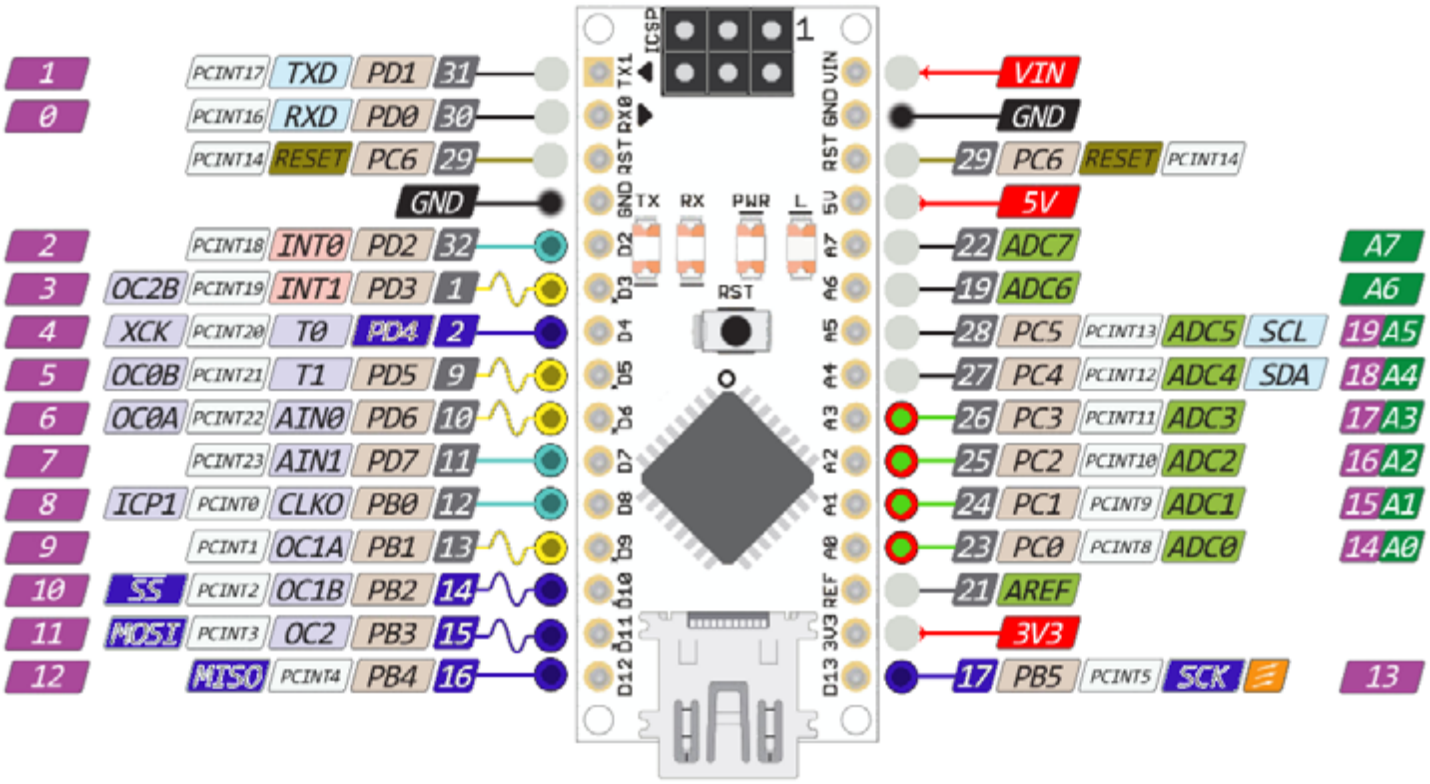

1 PCINT17 TXD PD1 31
0 PCINT16 RXD PD0 30
PCINT14 RESET PC6 29
GND
2 PCINT18 INT0 PD2 32
3 OC2B PCINT19 INT1 PD3 1
4 XCK PCINT20 T0 PD4 2
5 OC0B PCINT21 T1 PD5 9
6 OC0A PCINT22 AIN0 PD6 10
7 PCINT23 AIN1 PD7 11
8 ICP1 PCINT0 CLKO PB0 12
9 PCINT1 OC1A PB1 13
10 SS PCINT2 OC1B PB2 14
11 MOSI PCINT3 OC2 PB3 15
12 MISO PCINT4 PB4 16
ICSP
TX RX PWR L
RST
VIN
GND
29 PC6 RESET PCINT14
5V
22 ADC7 A7
19 ADC6 A6
28 PC5 PCINT13 ADC5 SCL 19 A5
27 PC4 PCINT12 ADC4 SDA 18 A4
26 PC3 PCINT11 ADC3 17 A3
25 PC2 PCINT10 ADC2 16 A2
24 PC1 PCINT9 ADC1 15 A1
23 PC0 PCINT8 ADC0 14 A0
21 AREF
3V3
17 PB5 PCINT5 SCK 13

Fig 7 SPI to blue circles, D10 through D13

Both boards, the JMRI USB CAN board, as well as the CAN Servo board connect to the SPI CAN module using pins 2 and 10-13.

D2 -> INT, D10 ->CS, D11 -> SI, D12 -> SO, D13 -> SCK, GND and 5V.

The first board keeps the USB cable plugged in and the latter gets the Servos and LEDs. A 1k Ohm resistor and an LED between pin 4 and 5V, will show some flash when a message leaves. The wires between the two CAN modules will be CAN-H, CAN-L (making the twisted pair, and don't question this, just do it, we've tried it!) and a GND or ground wire, remember this wire. Somewhere on your CAN bus, you will need to put a 120 Ohm resistor between the CAN-H and CAN-L wire, simply put a jumper on one board at J1, the resistor is already there. Yes, it might work fine without it, until the day you want to show your awesome CAN accomplishment to someone and then it won't, so install the jumper and the GND wire now.

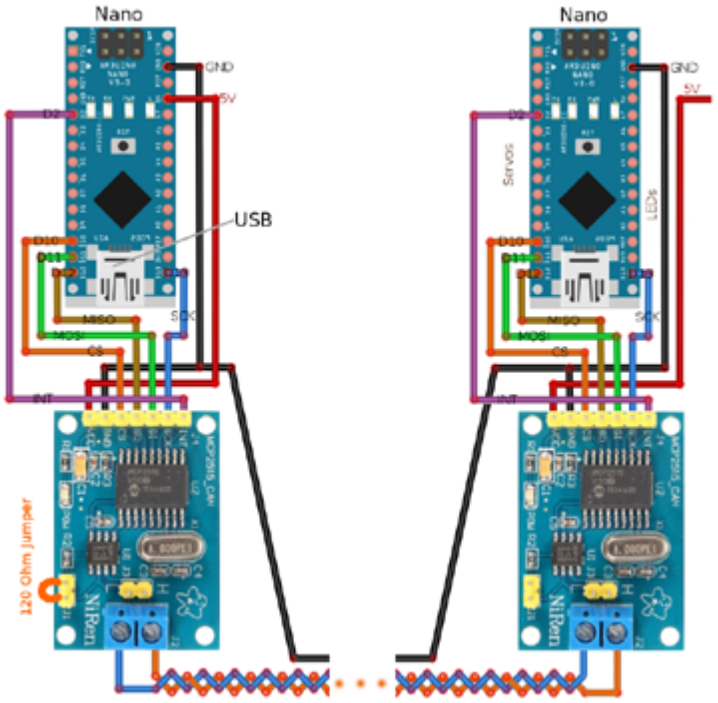


Fig 8 USB to Computer on left, Nano with Servos and LEDs on right

The code on the USB to CAN Nano is simply making sure the messages from JMRI are of the kind that we care about. The ones to make it a true LCC system, we ignore for now, this article is already long and boring, just don't send your design in for certification without adding all that. It takes the messages coming over the USB cable, and actually then over the Rx pin (Arduino pin 0), looking more like this: " : XCACB4000N03000102030201 01;" - notice the 3.0.1.2.3.2.1.1 in the blue blue after 4000N? Following the **N** is our message sent when we **Closed** Turnout 1, as specified after the colon in the 2nd part of the Turnout 1 Hardware Address field. And catching the starting ':' and closing ';' of every message and then the part after the 'N', is all we are going to care about here.

Code for data to transmit onto the CAN bus from JMRI:

```
/*
 * Sending CAN messages from Serial port as received from JMRI. JMRI will
 * send a ':'; some bytes; an 'N'; up to 8 data bytes we want to send and
 * then a ';'. We are going to ignore everything except the data between
 * 'N' and ';', and then send the bytes out on the CAN bus. If we did
 * receive more than 8 bytes when ';' comes, we don't send and wait for
 * the next data.
 *
 * The data shows up over the serial port as two hexadecimal characters,
 * ( nibbles ) 0x00 thru 0xFF, so we need to take care of making the two
 * characters into one 8 bit byte. Of course, a message like:
 * 03.00.01.02.03.02.01.01 does not have A-F, but we are going to avoid
 * running into the problem when the message ends in something like
 * .02.5F.AE. Examples :XCACB4000N0300010203020101; or
 * :XCACB4000N5AA500FFDEADBEEF;
 *
 * Put an LED and 1k resistor between 5V and STATUSLEDPIN to see some
 * action when sending a message.
 *
 * Author: Speed Muller, Date: 2016.07.16
 */
```

```
#include <mcp_can.h>
#include <SPI.h>

#define VERSION                "canJMRISendLCC ver 010"
#define CANPIN      10
#define CANINTPIN    2                // not used here, we don't listen to CAN yet
#define STATUSLEDPIN 4
#define CANMSGSIZE   8

MCP_CAN         myCan( CANPIN );      // CAN object with CS as CANPIN
bool            initSuccess = false;  // keep track if CAN initialized
unsigned char   data[CANMSGSIZE];     // send CANMSGSIZE bytes max
char            inChar;               // character from Serial port
unsigned char   value;                // data value with HI and LO nibble
byte            charPosition;         // track of where next Serial char goes

enum States   { BEFORE, COLON, NHI, NLO, WAIT4SEMI, SEMICOLON };
States          state = BEFORE;

void setup( ) {
  pinMode( STATUSLEDPIN, OUTPUT );
  digitalWrite( STATUSLEDPIN, HIGH );
  Serial.begin( 115200 );
  // init can bus with a baudrate = 500k
  initSuccess = myCan.begin( CAN_125KBPS, MCP_8MHz ) == CAN_OK;
  // .. Serial.println(  VERSION  ); // avoid talking to JMRI this round
} // setup

void loop( ) {
  if ( !initSuccess ) {  // flash LED if CAN did not initialize
    delay( 100 ); digitalWrite( STATUSLEDPIN, HIGH );
    delay( 100 ); digitalWrite( STATUSLEDPIN, LOW );
    return;     // end of loop( )
  } // if CAN init failed

  while ( Serial.available( ) > 0 ) {
    inChar = Serial.read( );
    switch ( state ) {
    // in the beginning...
    case BEFORE:
      if ( inChar == ';' ) {
        state = BEFORE;
        digitalWrite( STATUSLEDPIN, HIGH );
      } // if
      if ( inChar == ':' ) {
        state = COLON;
        digitalWrite( STATUSLEDPIN, LOW );
      } // if
      break;
    // only when a COLON showed up, we reset the data and position
    case COLON:
      if ( inChar == ';' ) {
        state = BEFORE;
        break;
      } // if
      if ( inChar == ':' ) {
        state = COLON;
        break;
      } // if
      if ( inChar == 'N' )
        state = NHI;
      for ( int i = 0; i < CANMSGSIZE; i++ )
        data[i] = 0x00; // clear data buffer
      charPosition = 0; // next char goes to 0
      break;
```

```
// only when an N showed, do we copy the incoming data, HI
// nibble first
case NHI:
  if ( inChar == ';' ) {
    if ( charPosition > 0 ) {
        state = SEMICOLON;
    } else {
        state = BEFORE;
        break;
    } // if
  } else {
    if ( charPosition < CANMSGSIZE ) {
        // HEX is 0-9 and A-F ( caps assumed ) remove '0' or
        // 'A' to get value, get HI => val * 16
      if ( inChar < 'A' )
        value = ( inChar - '0' ) * 16;
      else
        value = ( 10 + inChar - 'A' ) * 16;
      state = NLO;  // LO Nibble next
    } else {
      state = BEFORE;
      break;
    } // else
    break;
  } // if else
// no break here
case WAIT4SEMI:
  if ( inChar == ';' ) {
    state = BEFORE;
    break;
  } // if
case SEMICOLON:
  digitalWrite( STATUSLEDPIN, HIGH );
  // send CAN data: ID = 127, Standard frame,
  // data len = CANMSGSIZE, data: buffer
  myCan.sendMsgBuf( 127, 0, charPosition, data );
  state = BEFORE;
  delay( 100 );   // delay a bit
  break;
// copy the incoming data LO nibble
case NLO:
  if ( inChar == ';' ) {
    state = BEFORE;
    break;
  } // if
  if ( charPosition < CANMSGSIZE ) {
    // HEX is 0-9 and A-F ( caps assumed ) remove '0' or
    // 'A' to get value, val = val + LO
    if ( inChar < 'A' )
       value += ( inChar - '0' );
    else
      value += ( 10 + inChar - 'A' );

    state = NHI;
    data[charPosition++] = value; // add value to buffer
    value = 0;
    if ( charPosition == CANMSGSIZE ) {
        state = WAIT4SEMI;
        break;
    } // if
  } else {
    state = BEFORE;
    break;
  } // if else
  break;
```

```
    // anything else shows up? we reset!
    default:
      state = BEFORE;
      break;
    } // switch
  } // while Serial.available()
} // loop
/****************************** END OF FILE **********************************/
```

Then you can also imagine that the receiving Node, or consumer, will take every message, like **0300010203020101** and decide if it needs to do something about it. Is that message useful to me, do I have something to do when that message is received, like **Close** a turnout or move a Servo Clockwise, and maybe do nothing, since the Servo is already in that position.

Code for receiving CAN messages and move some Servos:

```
/*
  CAN receive from JMRI over LCC
  When receiving one of 8 messages over CAN from JMRI's LCC turnouts,
  move one of the 4 servos into the left or right position

  Ctrl-Shift-M to open the Serial Monitor to see your messages coming in.

  Author: Speed Muller, Date:   2016.07.16
*/

#include <mcp_can.h>
#include <SPI.h>
#include <Servo.h>

#define VERSION          "canJMRIServoReceiveLCC ver 003"

#define OURID 0x03000102
#define DEBUG      false
#define IMALIVE     3000
#define CHECKIN      300

#define CANINTPIN      2
#define CANPIN        10
#define STATUSLEDPIN   4
#define CANMSGSIZE     8

#define SERVO1PIN      3
#define SERVO2PIN      5
#define SERVO3PIN      6
#define SERVO4PIN      9

/* skipping these until we can send events back to JMRI
* #define SERVO1INPIN    2
* #define SERVO2INPIN    4
* #define SERVO3INPIN    7
* #define SERVO4INPIN    8
* #define UPDATETIME   100
*/
// could also use 14,15,16 and 17 here:
#define SERVO1LEDPIN  A0
#define SERVO2LEDPIN  A1
#define SERVO3LEDPIN  A2
#define SERVO4LEDPIN  A3

#define SERVOLEFT     75
#define SERVORIGHT   105
```

```
#define SERVOCNTR     90

/*
And of course you need to copy the whole previous
"class SlowerServo : public Servo { };" in here from before if you want slower
moving servos like SlowerServo myServo1( UPDATETIME/2 ); and
SlowerServo myServo2( 2*UPDATETIME );
*/

Servo myServo1; Servo myServo2; Servo myServo3; Servo myServo4;
MCP_CAN       myCan( CANPIN );       // CAN object with CS as CANPIN
bool          initSuccess = false;   // keep track if CAN initialized

long unsigned int rxId;
unsigned char  len = 0;
unsigned char rxBuf[8];
unsigned long incomingEvent;
byte value;

bool lightOn = false;
int pin1 = HIGH;

void setup() {
  Serial.begin( 115200 );
  myCan.begin( CAN_125KBPS, MCP_8MHz ); // init can bus : baudrate = 500k
  pinMode( CANINTPIN, INPUT );          // Setting pin CANINTPIN for /INT input
  pinMode( SERVO1LEDPIN, OUTPUT ); pinMode( SERVO2LEDPIN, OUTPUT );
  pinMode( SERVO3LEDPIN, OUTPUT ); pinMode( SERVO4LEDPIN, OUTPUT );

  incomingEvent = 0;
  Serial.println( VERSION );
  myServo1.attach( SERVO1PIN ); myServo2.attach( SERVO2PIN ); // attach to pins
  myServo3.attach( SERVO3PIN ); myServo4.attach( SERVO4PIN ); // attach to pins
  myServo1.write( SERVOCNTR );  myServo2.write( SERVOCNTR );  // move to middle
  myServo3.write( SERVOCNTR );  myServo4.write( SERVOCNTR );  // move to middle
} // setup

void loop() {
  if ( !initSuccess ) {                 // flash LED if CAN did not initialize
    delay( 100 ); digitalWrite( STATUSLEDPIN, HIGH );
    delay( 100 ); digitalWrite( STATUSLEDPIN,  LOW );
    return;   // end of loop()
  } // if CAN init failed

  if ( !digitalRead( CANINTPIN ) ) {    // If pin 2 is low, read receive buffer
    myCan.readMsgBuf( &len, rxBuf );    // Read data: len = data length, buf = data byte(s)
    rxId = myCan.getCanId( );           // Get message ID

    int i = 0;   // declare outside "for", we are breaking and continuing...
    for ( i = 0; i < len; i++ ) { // add each byte to 16 x 16 of the previous
      incomingEvent = incomingEvent * 16  * 16 + rxBuf[i];
      if ( i == 3 ) break;          // only need the first 4 bytes here to match ID
                                    // unsigned long is only 32 bits, we need 64, do 1st half
    } // for i

    if ( incomingEvent != OURID )  // is it for us?
      len = 0;                     // it is not our message (only len==8 will go), so bail
    incomingEvent = 0;             // unsigned long is only 32 bits, we need 64, so we do the 2nd
                                   // part now...
    for ( i; i < len; i++ ) {      // add each byte to 16 x 16 of the previous
      incomingEvent = incomingEvent * 16 * 16 + rxBuf[i];
    } // for i
    Serial.println( );
    if ( len == 8 ) {              // this node do only 8 byte messages!
      switch ( incomingEvent ) {   // of course the messages are hard coded here, but you could
```

```
                                    // easily store them in EEPROM and update them as you
                                    // configure your nodes
        case 0x03020101:  // 1st servo
          Serial.println( "1-closed" ); myServo1.write( SERVORIGHT );
          digitalWrite( SERVO1LEDPIN, LOW );
          break;
        case 0x03020100:
          Serial.println( "1-thrown" ); myServo1.write( SERVOLEFT );
          digitalWrite( SERVO1LEDPIN, HIGH );
          break;
        case 0x03020201:  // 2nd servo
          Serial.println( "2-closed" ); myServo2.write( SERVORIGHT );
          digitalWrite( SERVO2LEDPIN, LOW );
          break;
        case 0x03020200:
          Serial.println( "2-thrown" ); myServo2.write( SERVOLEFT );
          digitalWrite( SERVO2LEDPIN, HIGH );
          break;
        case 0x03020301:  // 3rd servo
          Serial.println( "3-closed" ); myServo3.write( SERVORIGHT );
          digitalWrite( SERVO3LEDPIN, LOW );
          break;
        case 0x03020300:
          Serial.println( "3-thrown" ); myServo3.write( SERVOLEFT );
          digitalWrite( SERVO3LEDPIN, HIGH );
          break;
        case 0x03020401:  // 4th servo
          Serial.println( "4-closed" ); myServo4.write( SERVORIGHT );
          digitalWrite( SERVO4LEDPIN, LOW );
          break;
        case 0x03020400:
          Serial.println( "4-thrown" ); myServo4.write( SERVOLEFT );
          digitalWrite( SERVO4LEDPIN, HIGH );
          break;
        default:
          break;
      } // switch incomingEvent
    } // if len == 8
  } // if CANINTPIN
} // loop
/****************************** END OF FILE **********************************/
```

So, maybe your Nano does nothing when the first message comes, since the Servo was already sent Clockwise, but at least when the 2nd message come to go CCW (counter clockwise), something might just move!

A few more random notes: If you don't have an Arduino connected to get a COMx port in Windows, you can choose CAN Simulation as System connection in **Edit ->Preferences**, and still see the messages sent in the ***LCC -> Traffic Monitor***. Linux and MAC uses something looking closer to `/dev/ttyUSBx` or `/dev/ttyACMx` for a communication port, but you have already seen this in the Arduino serial port menu, nothing new, hey?

As you play around with the USB Arduino (connected to JMRI), keep in mind that when it resets for any reason, JMRI is still holding COMx open, so when the Nano comes alive again, it might become COMx+1. So when you hear the Windows "USB ding sound", close JMRI, cycle power to the Nano and then start JMRI again.

If you don't have servos for your second Nano, you can simply watch the `digitalWrite(pin, HIGH/LOW);` to at least see the LEDs turn on and off!

All the code (as well as the JMRI ML2016_07.xml file) for all 4 turnouts are online at www.TxNamib.com in the *Rrrduino* department, scroll down to the Marker Lamp section once on the Rrrduino Clinic page, even though, to save space, only one or two turnouts are shown in the code above. The comments in the code shown should provide some flashlight in the dark, and if it was too easy, I would encourage you to join the movement and write an article or two yourself!

Thank you for at least reading along! ***ML***

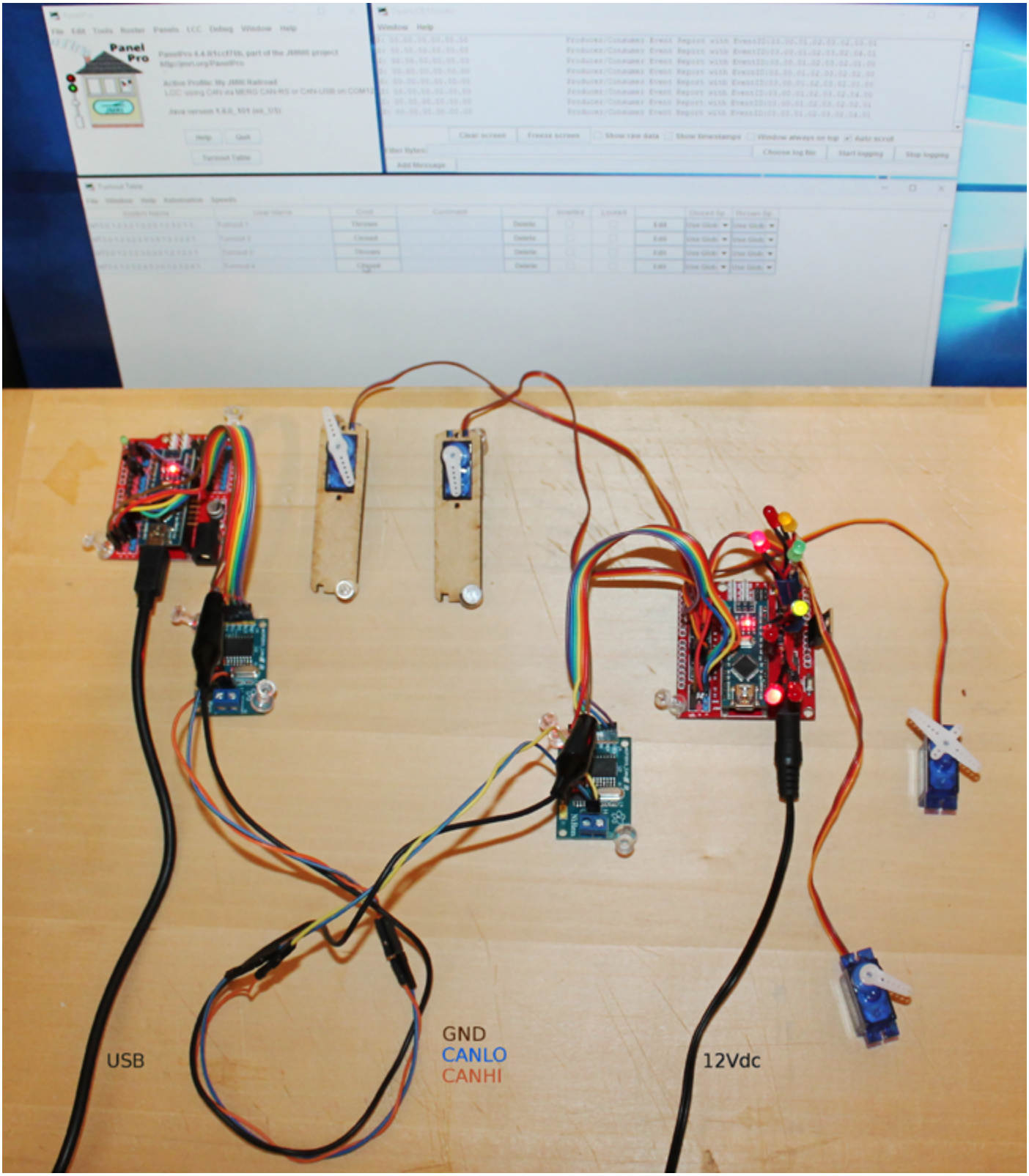
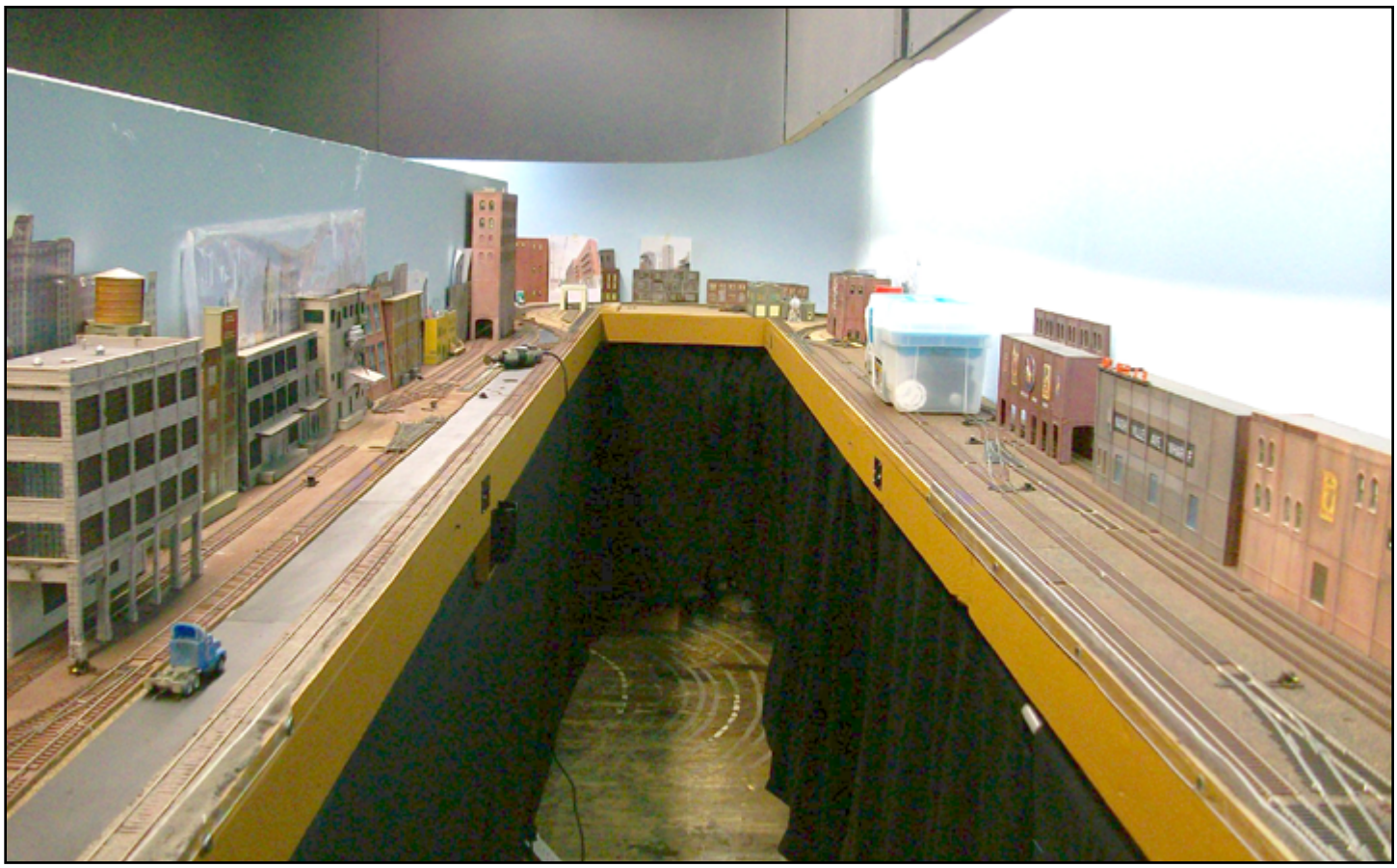


Fig 8 All up and running with JMRI changing LEDs and Servo positions!

The History of the Crescent City Lines



Text and photos by Ken Mason

Since its conception in 1956, the "Crescent Lines" has grown from a small short line railroad to that of a major trunk line serving the South Central United States. Expansion of operations and greater financial stability was achieved due to an employee buyout in 1990.

The "Crescent Lines" River Division operates a north-south mainline from Vicksburg, Mississippi to the Crescent City. Listed below are the cities, towns, and major industrial areas served by the "Crescent Lines" as well as major interchange points.

THE MISSISSIPPI & LOUISIANA RAILROAD COMPANY

The M&L operated from the gulf port of Crescent City in southeast Louisiana to Memphis, Tennessee for many years. The "Miss Lou", as she was affectionately known, had survived by hauling grain, rice, pulpwood, and soybeans as well as general cargo.

By 1956 the competition from the Illinois Central, Kansas City South-

ern, and the Missouri Pacific had taken its financial toll. With decreased profits aging equipment, the decision was made to offer the M&L for sale. This decision was considered a joke by most railroad officials in the country due to the lack of revenue, outdated equipment, as well as what was considered an obsolete right of way.

By the summer of 1956 the only offer for the M&L had been made for 5% of value. The investors involved had maintained an interest simply from their childhood dreams of someday becoming rail barons, and for their love for trains. These investors (who had just lost their first railroad, the New Orleans & Western in bankruptcy) were awarded sale of the M&L in the summer of 1956.

The "Miss Lou" continued operations, but under new ownership added dedicated reefer service to haul Ponchatoula strawberries, as well as Plaquemines Parish tomatoes and oranges. With wise investments of the profits from the reefer service, the M&L was in proper financial shape to acquire other bankrupt railroads and slowly expand its service area.

THE MISSOURI & NORTH ARKANSAS RAILROAD

In the fall of 1956, after several years of upgrading its mainline in speculation of hauling coal from the just discovered coal fields of Arkansas, the M&NA went bankrupt and was put up for auction. The Mississippi & Louisiana Railroad Company (now unofficially known as the Crescent Line), carefully

considered and calculated the decision to acquire the M&NA. Realizing the potential for lumber and paper business of southern and western Arkansas as well as a bridge line from Springfield, MO (and the Frisco) southward and eastward around the Ozarks to the M&L's Frog Bayou interchange, the M&L successfully bid for the M&NA.

Now, officially known as the "Crescent Lines", the company successfully operated both its original line from Crescent City to Memphis and its bridge line from Frog Bayou to Springfield.

In 1964 the mainline from Frog Bayou to Memphis was sold to a decline in revenues.

In late 1968, after years of problems with their contract with the I.C. for use of their car ferry at Helena, LA, the Crescent Lines decided to build a bridge crossing near Frog Bayou. The bridge was completed in 1972. In 1974 the I.C. abandoned its car ferry operations at Helena. The old spur to the car ferry from the Crescent Lines mainline is still visible near River City.

THE TCHOUPITOULAS RAILWAY AND NAVIGATION COMPANY

For years the T.R.N.C. and the New Orleans Public Belt held a stranglehold on the ports of New Orleans and Crescent City. The N.O.P.B. had been edging out the T.R.N.C. for years, and in 1975 finally forced the T.R.N.C. into bankruptcy.

Expecting no other bidders on the T.R.N.C.'s obsolete trackage and equipment, the N.O.P.B. entered a low bid, hoping to destroy its only competition.

In an unexpected move the Crescent Lines bid on, and successfully obtained the T.R.N.C., establishing a direct link with Ellison, the Crescent City's port area, as well as the coffee wharfs and warehouses. This enabled the Crescent Lines to add unit coffee trains in service, adding increased profits.

FORMER BURLINGTON NORTHERN MAINLINE

During the 1980-81 recessions, when most companies were being conservative, the Crescent Lines gambled on the up and coming coal fields of Wyoming by buying the former B.N. mainline between Spring-

field and Kansas City, MO. This gamble also paid off with increased profits.

THE TURNER CITY & FROG BAYOU SHORT LINE

For many years the Turner City Lumber Company operated a short line from its mill in Turner City, AR, to its logging operations at Pemme De Terre, LA. In late 1988, the Turner City Lumber Co. and the Dan River Lumber Co. of Frog Bayou, MS merged. This expanded the right of way from Frog Bayou to Pemme De Terre. Besides lumber, the T.C. & F.B. also carried general cargo to Turner City from its interchange with the Crescent Lines at Frog Bayou.

With illusions of grandeur, the T.C. & F.B. started clearing a right of way from Pemme De Terre to the town of Nickolson at the Arkansas state line, hoping the direct route thru the Ozarks would prove profitable by competing with the Crescent Lines.

Problems occurred when a cave in of tunnels north of Pemme De Terre occurred. Claims were made against the Crescent Lines of sabotage. Law suits were filed and investigations were held. The end result was that the Crawford Mining Company, owned by the major stockholder of the Dan River Lumber Company, had run out of money to complete the project. The money had been embezzled by the owner who had sabotaged the tunneling effort placing false blame on the Crescent Lines.

After paying off lawsuits for wrongful death, filed by the families of workers killed in the cave in's, and for slander filed by the Crescent Lines, the Turner City & Frog Bayou Shortline was bankrupt.

At auction, the Crescent Lines used money gained from the lawsuit to purchase the T.C. & F.B. short line and its unfinished right of way thru the Ozarks.

The Crescent Lines had been considering purchase of the Missouri Pacific's White River Division for some time, but considering price, the unfinished right of way thru the Ozarks. Construction of this right of way took two years. Once it was finished, the old mainline thru West Scorsone, Covington, and Los Guanos was abandoned in favor of the Turner City, Eureka Springs, Pemme De Terre, Cross Timbers, and Nickolson route.
Since the right of way was started by a lumber company, this route contains the most modern wood trestles in the United States.

ILLINOIS CENTRAL PASSENGER TERMINAL PURCHASE

In 1990, the Crescent Lines purchased the old I.C. passenger terminal in Crescent City, which had accommodated the Crescent Lines commuter service as well as its name trains "The Acadian", "The Evangeline", and "The Crescent" for many years.

In 1983, the Crescent Lines deleted its commuter service from Crescent City to Spanish Fort, LA, serving Willoughby, Faubourg, as well as flag stops E.W. Tower, but continued "The Evangeline" and "The Acadian", due to a lack of interest by Amtrak to operate in the region. ("The Crescent" an all heavyweight steam train was taken out of service in 1968 and its remaining equipment sold to a private collector.)

With the completion of the direct route thru the Ozarks to Kansas City, Amtrak expressed interest in instituting Superliner service from Crescent City on C.L.'s mainline to Kansas City and beyond to Seattle, so as to fill in one of the two gaps in their nationwide system. With negotiations finalized in 1991, the trial period of the "Northwest Crescent" was begun with trains averaging four cars on a tri-weekly schedule. By the end of 1991 the trains averaged six cars on a daily schedule.

When contract agreements between Amtrak and the Crescent Lines were finalized for a ten year period, the Crescent Lines was to retire her remaining two passenger trains, and Amtrak was to change the name of the "Northwest Crescent" to the "Crescent Limited" in honor to the Crescent Lines premier train of the past.

The Board of Directors of the Crescent Lines elected not to sell or scrap any passenger equipment, but to store it on display at its terminal at Crescent City to be used for excursions and rail fan trips. (It should be noted that before the Amtrak agreements, Crescent Lines passenger equipment had been in short supply due to the increased excursions booked for rail fan trips, to see the natural beauty of the Ozarks rarely seen.)

The Crescent Lines also leases space at its terminal in Crescent City to private car owners creating one of the largest displays of private cars in the United States.

EMPLOYEE BUYOUT

During the summer of 1990 the employees of the Crescent Lines were able to achieve a buyout of the company. The financial outlay forced the sale of all but necessary motive power. Due to the Crescent Lines being employee owned, as of December 1990 it is no longer union, but open shop.

OTHER HISTORICAL CRESCENT LINES FOOTNOTES

Footnote 1

Back around the turn of the last century, Horseshoe Seafood was a then growing business in the little hamlet of Spanish Fort. Buildings were of all wood construction, and

were located very close together. The Horseshoe Seafood plant employed almost fifty workers, supplying fish and fish byproducts to towns as far away as Turner City. Two local boys, whose grandfather had founded the local quarry in Frog Bayou, relocated to Spanish Fort to prove that they could "make it on their own". One brother, the elder of the two, actually wound up as night manager of this growing company. However, his personal problems, coupled with a penchant for over imbibing, proved to be his, and the town's, undoing.

On March 4th, 1906, after having gone to the local neighboring "burlesque" establishment, he returned to his duties in a condition later related by witnesses as being "falling down". The stories get confusing from this point forward, but apparently he fell asleep while his new invention, a gas powered fish scaler. Soon the whole plant caught fire.

The man escaped, but due to the closeness of proximity of the plant to the other buildings in town, 95% of the town ultimately burned to the ground. The plant owners not only promised to rebuild, but helped fund the rebuilding of most of Spanish Fort. The plant was relocated farther out on the wharf, so if another fire did occur, only the plant would go up.

The townspeople were so impressed by the owners, that all lawsuits were settled for pennies on the dollar. The only stipulation was that this manager and his brother were forbidden to return. They went back to Frog Bayou, and along with their sons continued, as one spokesman later put it, playing in the dirt!

Although the first #960 series of M&L R.R. cars were destroyed in the fire, the plant also helped the railroad with purchasing replacements.

This second series sported new steel underframes, and their increased capacity coupled with their new construction, proved very successful in years to come. This, plus the opening of new markets for the Horseshoe Seafood products, led directly to many boom years for the railroad, as well as her successors.

Additional cars, of somewhat similar construction, also resulted from this tragedy.

Footnote 2

Originally being hired as a day laborer, Mr. R.T. "Hue" Stunn, quickly rose through the ranks of the railroad. Ultimately, his job as head of sales and marketing, led to his being promoted to the new position of customer representative for the entire southern portion of the Crescent Lines.

Always claiming to be ahead of his time, "Hue", as his co-worker called him, due to his colorful per-

sonality, as well as clothing selection, decided to work the newly connected petroleum pant located on the line at Ellison/Faubourg. His main contribution was in the area of radio electronics.

To aid in easing the dangers of a potential explosion at the plant, Hue engaged the services of a local boy, Mr. Dana Troll, to help him design a prototype unit allowing electric switchers to be run by remote control. Although initially successful, on July 16th, 1965, while being run by Hue, the unit went wild and ran through the track stops, onto the CL mainline, smashing into the oncoming Crescent Limited.

Although damage was light, Crescent Lines' officials, as well as government investigators, clearly fixed the cause of the accident as a combination of operator error, and negligent design. Hue was fired, and lawsuits resulted. Finally, he and Troll were forced to pay back thousands of dollars illegally taken from the coffers of the railroad to fund their endeavor. Fearing arrest, and in a last act of defiance, Stunn set fire to several railroad cars located next to the car shops for repairs.

He fled the country south, and was last reported selling wrapping papers for local cigarette merchants on the tiny atoll of Ashtaway, in the Solomon Islands.

DIESELIZATION OF THE CRESCENT LINES

THE EXPERIMENTAL YEARS

The first diesel locomotives arrived on the Crescent Lines in 1940. They were two pairs of EMC E6A's acquired for a new all coach streamliner. It was felt that they would contribute to the image of the train and the road. The next year, the road sampled a 1,000 horsepower switcher from each of the builders, "just out of curiosity" as they said in the annual report that year.

During the war, the supply of diesel switchers was limited to Alco and Baldwin, but the road only acquired a handful of these so it didn't really matter. However, the E6's proved themselves, regularly handling consists swollen with heavyweight equipment. The only problem was that no spare unit was available when necessary.

Even before V-J Day, the road committed itself to dieselizing its premier train, The Crescent. An order was placed with EMD for five 2,000 horsepower passenger units, which were delivered in 1946. The fifth unit would provide a spare for the other eight. Plans had also been made to streamline the The Crescent, but the units arrived before the cars.

In 1947 the Crescent Lines took delivery of two 4,500 horsepower, three-unit freight locomotives, one each from Alco and EMD. The move was officially described as "an experiment to examine the practicality of diesel locomotives in certain situations". Meanwhile, the switchers kept coming.

As a result of this "experiment", and the following year they got three pairs of EMD F3A units "for additional evaluation", and six Alco RS-2's, equipped with steam boilers, for Crescent City commuter service. The motive power department generally preferred EMDs, but they were anxious to dieselize the commuter service and EMD did not have any real road switcher in its catalog. Then, in late 1948, what had been an "experiment" became company policy, large scale DIESELIZATION.

THE DIESEL YEARS

In the fall of 1948, the Crescent Lines had 38 diesel units in service. Nine 2,000 horsepower passenger engines and twelve 1,500 horsepower freight units were operating system wide. In addition, 11 switchers and the six RS-2s were assigned to various locations across the system. These units' abilities were now known, they could no longer be considered "experimental". So, late that year, a program for large scale dieselization was formulated.

With an abundance of well-maintained steam locomotives on the property, it was decided to dieselize on a division by division basis. Since the River Division already had diesels in yard and commuter service, and it had no convenient supply of coal, it was considered a "natural" for early dieselization. Conversely, the Mountain Division would be one of those where steam would be one of those where steam would be concentrated. In this way, duplication of service facilities could be minimized.

The initial plan called for acquisition of 30 diesels per year for the next for four years. This would give the road slightly in excess of 150 units. Ellison would be the shop for units in the Eastern Region, while Central City would be the diesel shop for the Western Region. And so, an order was placed for 30 units.

In 1949, the road got from EMD three F7 A-B-A's, four F7 A-A's, three FP7 A-A's, one spare F7A, two SW7's, one TR4 set(for the grade on the Tchoupitoulas Harbor line), and three Baldwin DS 4-4-1000's. Although the road was EMD oriented, it found the Baldwin switchers well suited for certain "tough" assignments. Initially, the A units did not have M.U. connections on their noses. However it was soon discovered that the spare A unit could not be used to replace a B unit. It was quickly modified and, as the other units came in for their annual inspections, they too received nose M.U. connections.

The next year saw more of the same, with one exception. In addition to three EMD A-B-A F7's, one A-A E8, two TR4's, and two SW7's; they got nine of EMD's newly introduced GP7's. Almost immediately, the road's

concept of using "sets" of cab units changed.

During 1950 Alco revised its catalog with "improved" models; for 1951, the motive power people decided to sample an assortment of units. As a result, 40 engines were delivered that year. Of these, only 14 were cab units; 23 were road switchers, including 10 with steam boilers; and three were yard units. It was decided to assign all 15 of the new Alco's to the Western Region and to concentrate all non EMD power there. As a result, the RS-2's at Crescent City went west and were replaced by some of the new GP7's.

In 1952, the last year of the four year plan, the line got what were to be the last cab units, all of which were for passenger service. The bulk of the order was for EMD GP7's, including six with dual cab controls and six more with boilers. Since the new Alco's were still being evaluated, the only non EMD's were the two Baldwin S12's. By the end of 1952, there were 168 units on the books and the River Division was, for all purposes, dieselized.

THE TWILIGHT OF STEAM

At the end of 1952, the Crescent Lines was approximately 75% dieselized. The motive power department found that it was getting more work out of its diesels than it had anticipated. Certainly, no more than 50 additional units would be necessary to complete the replacement of steam.

But now, there were some different considerations. During seasonal slumps, many of the remaining steamers were stored. Why rush to replace them with expensive diesels which would likewise be idle part of the year? In addition, there was less need for a "universal" unit. Many of the steamers were on the Mountain Division and in the other mountainous areas; up to now, the only way to cope with the grades was to use more units. What was needed now was a mountain diesel.

Coincidentally, Electro-Motive had just introduced its six motor SD7; so, for 1953, pair of these and two Alco RSD-5's was ordered, along with more four axle road switchers.

The "big sixes" were tried out all over the system, but spent most of their time in the mountains and freight yards, where their abundant tractive effort was most useful. The power people were sure they had found their "mountain diesel". It was planned that additional C-C's would be acquired, a few at a time, until all operations were dieselized.

In 1954, EMD introduced its "9 Line"' using the 567C engine. So the units ordered were four SD9's and two GP9's, along with two more Alco RSD-5's and two Baldwin S-12 switchers, the last Baldwin's to be acquired. The big engines roamed through the mountains in pairs and trios, as well as mixed with smaller units. It became common to see them on the Mountain Division running between F7A's, which the crews preferred to operate from because of their comfort and visibility.

For 1955, four more SD9's were ordered, as well as the lines last switcher (for many years), a single EMD SW1200. Shortly after these units were placed in service, it was determined that the last of the steam could be replaced the next year.

Early in 1956, it was established that eight units would be required. As might be expected, four were SD's. But that year, Alco came out with its "251" powered units, so two DL-701's and two DL-702's were also ordered. On November 6, 1956 the fire was dropped on the last Crescent Lines steam engine. The road had acquired 206 diesel locomotives in 17 years; dieselization was complete. ML

NMRA Layout Directory

Work is underway on a new program to create a member Layout Directory. This will replace the visitation feature of the old NMRA Pike Registry Program.

The Layout Directory will be an on-line system that allows NMRA members (only) to:

- Identify the layouts of participating NMRA members by location, scale, gauge, era, prototype and area modeled, etc.
- Review the particular features of the layouts
- Contact layout owners to arrange visits or exchange common-interest information

Layout owner participation will be voluntary and built-in security features will protect privacy.

A working group has been formed to develop the Directory and input is needed from NMRA members.

One of the first tasks of the group is to survey layout owners from the old Pike Registry and visitors to their layouts to determine:

- What visitation aspects worked
- What didn't work
- What features they liked
- What features they didn't like
- Suggestions for the new Layout Directory

The working group also will survey other NMRA members who either own layouts or are interested in visiting layouts to determine what they expect from a directory, what concerns they may have and suggestions in general.

NMRA members are invited to comment by contacting the working group chairman, Bob Chaparro, at chiefbobbb@verizon.net or 951-925-2069.

Members interested in having their layouts included in the Layout Directory also should contact Bob. ML

MINUTES OF THE
LONE STAR REGION BOARD MEETING

Arlington, Texas – June 26, 2016

President Steve Barkley called the Annual Board meeting to order at 10:45 AM.

Roll call

All of the officers, directors and committee chairpersons were present except:

Voting Board Members:

Division 3 – Jerry Hoverson – Marc LaChey
Division 6 – Kevin Bergeman – Chris Atkins
Dir. At Large – Art Houston – Rod Fredericks

Non-voting Board Members:

Convention – Jack Merkel
Historian – Jim Long
Convention 2015 – George Bohn, Dave Cummings

Guests in attendance:

Charlie Getz – NMRA President
Randall Wilson – 2017 Convention Chair

Minutes of Previous Meeting

Secretary Jeff Palmer provided a motion and Chris Atkins seconded to dispense with the reading of the minutes and approve as published the Minutes of the January 30, 2016 Mid-Year Board of Directors meeting published in the 2016 Winter issue of The Marker Lamp - designated as 2016-06-26 LSR Motion 1 passed.

At this point, Steve Barkley invited Mike Mackey, who was not feeling well, to present a brief summary of the convention. No financials were discussed. Ending the remarks, Steve thanked Mike Mackey and John Garfield for holding a successful convention.

Officers Reports

President Steve Barkley

This last year was a good year for the LSR and its members. The Region and its members accomplished much during the past year. There are challenges ahead.

ANNUAL CONVENTIONS

The 2015 Annual Convention was held in Beaumont. Attendance was about 110. As with all conventions, there were clinics, a host hotel, and a contest. There was also a silent auction which allowed many of us to exchange our white elephants for someone else's white elephants.

The 2015 convention demonstrated that a smaller city can successfully host an annual convention. Attendance will be less than conventions held in larger cities such as Houston and the Dallas Fort Worth areas.

The 2015 convention lost about $2,000.00. The convention committee kept registration at a low rate to encourage LSR members to attend. Looking back, registration fees should have been higher, perhaps $25.00 higher to cover all costs. But, would that have reduced attendance? How sensitive are our members to paying higher registration fees? Registration fees really are a small percentage of the cost to attend the annual convention when considered against the cost of a hotel, travel, and the like.

LSR INCOME AND COMMITMENTS

In the past, much of the LSR's annual income came from convention profits. That may no longer be the case in the future. Again, the 2015 convention lost about $2,000.00. The results are not yet in for the 2016 convention. Hopefully it will be profitable.

The NMRA remits the LSR $2.00 per member. The LSR has about 1050 members as of now which produces $2100.00 per year in revenue.

At the mid-year meeting the LSR Board of Directors voted to give 50% of this payment to the individual divisions to fund their activities.

Convention raffle proceeds now go to the host committee, with no share going to the LSR.

This means that the LSR will have less income in future years. The Board should be very conservative in approving future continuing expenses.

LSR ACTIVITIES VERSUS CLUBS

The San Jacinto Model Railroad Club in Houston is a 100% NMRA club. Through Division 8 it will take the lead in hosting the 2017 Convention.

In Dallas Fort Worth the emphasis is now on NMRA meetings and activities. The Dallas Fort Worth LSR Divisions host this year's convention in Arlington.

I believe the central issue should not be whether model railroading activities happen through clubs, individual "lone wolf" modeling or through Division sponsored activities. The LSR should serve all members. Model Railroading is supposed to be fun! Internecine squabbles do not help any of us enjoy our hobby.

IRS 501(c)(3) STATUS

This is a bright spot in LSR finances. This alone saved about $1,000.00 in expenses at the Beaumont Convention. It will save money for the host committee at the Arlington convention.

The IRS confirmation letter is posted on the LSR website. This may be downloaded and printed for distribution to vendors.

THE MARKER LAMP

Riley Triggs has done a superb job editing The Marker Lamp. Our magazine is larger, more colorful, and more accessible than the older mailed edition. Electronic publication saves the LSR at least $4,000.00 per year. Back issues of the electronic edition are available at the click of a key or two.

More and more magazines are either going to all electronic versions, like Model Railroad Hobbyist, or are available both as paper and as electronic versions. Model Railroader, Trains, Railroad Model Craftsman and Railroad and Railfan are now offered in electronic versions. A computer is not required to read them. They can be read on tablets like the IPad and Kindle.

THANK YOU ALL FOR YOUR HELP AND SUPPORT

My second term as President ends next May. This will be my final annual meeting to preside over. Thanks to all of you for your service to the LSR and the help and friendship that you have extended. I have enjoyed my two terms as LSR President. It has been an honor!

Vice-President Bob Barnett

This report is a little late. If you read on you will quickly see why. On the morning of April 18th I awoke to the street flooded in front of my house. Seeing I was not going anywhere soon I decided to check the train room. The layout is in 2/3 of an 85 year old garage with a slab poured sans steel reinforcing. After emptying my shop vac tank six times I was ready to set up the fans to start drying carpet. Wet carpet in the back part of the train room is not that unusual; eight inches of rain in the predawn hours is.
After finally making my way to the office (another flood adventure I will not bore you with), I began getting email reports of the amount of flooding at Zube Park – Home of the Houston Area Live Steamers.

Turns out that area got about 18 inches of rain in 24 hours and we got several hundred feet of track washed out. The rebar anchors we have driven through the track saved the track from washing out into the woods so it has been a matter of dragging the track back into alignment, installing dozens of car loads of ballast, and hours of tamping and surfacing track. On Saturday May 21 we held our monthly Pubic Run Day and carried around 1800 passengers on the fully restored passenger mainline. That same weekend crews were restoring the remainder of the tracks to allow full operation of all main tracks by our annual Memorial Day Meet. Our Run Day visitors seemed truly amazed that this much work could be done in the four weeks since the flood.

On a lighter note, we continue with the monthly clinics/presentations in the Houston/Division 8 area. The San Jacinto Model Railroad Club, a 100% NMRA club, continues to have clinics the first Tuesday of each month at the Bayland Park Community Center. Ray Byer and Jim Lemmond with Division 8 have scheduled Saturday clinics for the remainder of the year held monthly on Saturday mornings also at Bayland Park. We hope to reach a wider array of modelers since not everyone can make a week night meeting and not everyone is available on the weekends.

Looking forward, 2017 Convention Chairman Robert Ashcraft is busy planning the 2017 convention and has narrowed the hotel search down to two venues. We are looking forward to hosting the convention and will have a full array of layouts on tour, clinics and activities. Robert is considering a week night trip to one of the rail museums in the area in lieu of a picnic and run night at HALS, citing the possibility of rain (see paragraphs one and two above). At any rate we promise a full slate of activities and look forward to seeing everyone in Arlington in June.

Treasurer Donna Orr
The Treasurer's Report, was submitted by email to the Board members and is summarized as follows:

Our current net worth is $37,934.36 down $1,457.61 from July (2015 Convention loss).

On the Officer's Page, all of Donna's financial spread sheets are available.

Secretary Jeff Palmer

Since the Mid-year Board Meeting in January, the LSR Secretary has been working with the LSR Treasurer, and the Nominations Chair on various LSR By-Law issues regarding the convention close out, and the destroying election ballots. The LSR By-Laws have been updated to reflect the BOD approved changes.

In keeping with the LSR By-Laws, the 2015 Convention committee still has not submitted their final reports and settled accounts with the LSR Treasurer. It is the opinion of the LSR Secretary that all officers as-

sociated with the 2015 Convention Committee should be removed from office – Steve Barkley, George Bonn, and Dave Cummings (already resigned).

Dave Cummings has resigned as Youth Chair.

The secretary ran the Officer's Election since Blake Bogs, the Nomination Chair, was running for a new office, At-Large Director. After reporting the results to the LSR BOD, and no issues surrounding the results were opened, all ballots and logs were destroyed. At the present time, the secretary is pulling together the Agenda and all related Motions. By the time the annual meeting is held, all preparatory LSR Secretary Tasks will have been accomplished. The last secretary task for the annual meeting, the writing of the minutes, will be done following the meeting.

It should be noted that this fall's election will be for offices LSR President, LSR Treasurer, Division Directors 1, 3, 5, and 7. I will be accepting BIOs from those seeking office the day after the Annual meeting and closing registration for those positions on December 1, 2016. The election will be held the month of February 2017. As a reminder, Ballots are NOLONGER being mailed, therefore the expense of mailing out convention registrations is now a convention expense. The only ballots being mailed out are to those members who do not have an email address; there are less than 50. This process began with the 2015 Beaumont convention.

While Bill McPherson began the re-work of the convention By-Laws, there are a number of areas not specifically covered in the By-Laws that need to be revised further; the LSR Secretary will be working on those items over the next several meeting.

The By-Laws are vague on reporting structure and accountability for Chairs. This will be a topic of discussion for the next several meetings.

It should also be noted that there are three open chairs:

1) Education Chair – open for 3+ years
2) Youth Chair – open for 2+ years
3) Nomination Chair – just opened

It would be good if the various Directors would look around their division, and see if there is a qualified candidate.

Advisor Bill McPherson

The Advisor's Report, was submitted by email to the Board members and is summarized as follows:

No Report

Directors Reports

Division 1 Director Chris Atkins reported that:

Since the mid-year board meeting we have had a division meeting in February, April and June.

We have been trying to have the meetings on the first Saturday of every other month.

In February Darrel Smith opened his home layout for the division to visit. Also, Laurie and Leo Palitti had an open house at their layout. Both layouts had good turnouts.

In April we met at my house in Argyle and I presented a clinic on building Easy Spline benchwork. We had about 15 people attend the clinic.

In June we met with Division 3 for a Soundtraxx clinic at their normal meeting place in Allen on our normal first Saturday time. This worked out very well. Division 1 had about 8 people there. Afterwards, several of us visited Jerry Hoverson's layout in Melissa.

Work continues on the 2016 Convention in Arlington. Monthly meetings have been held at the Cowtown Model Railroad Club House in Ft. Worth or at the convention hotel in Arlington. One exciting thing to report is that as division 1 attendance is nearly tied with division 3, which has nearly three times as many

people at their monthly meetings. I'm sure that this is at least in part because of the location in Arlington.

The Division continues to be active in the North Texas Council of Railroad Clubs. We continue to give at least four clinics at each show to promote the education of the general public about the hobby. Also, this is a great way to reach out to new members. Division 3 has stepped up to run the booth and our division is happy to help supply manpower.

I am still looking for someone to take the roll of Division Superintendent. Specifically, I need someone to help organize clinics at the meetings.

Division 2 Director Rod Fredericks reported:

Over past year, as Division 2 Director I have continued my outreach to model railroaders and clubs in the Bayou Division. Operations remain a major focus in the Baton Rouge/Houma/New Orleans area, and in Lake Charles.

My efforts to get more participation of NMRA/LSR members in events beyond the local sphere has improved marginally. This year six members from Division 2 attended the Beaumont convention, up from 4 last year. However, considering that the convention was just across the state line, even a 50% increase is not very good. So I remain doubtful of the Bayou Division being able to host a convention in the Baton Rouge/New Orleans area, in the near Future. It's hard to get volunteers to plan and work on hosting a convention if they have never attended one. At least that has been my experience every time I bring the idea up with local members.

Nevertheless, I will continue my effort to bring the Division into the larger world of model railroading. This fall we started a model railroad skills clinic series in the Baton Rouge area. The first clinic on making trees was successful, and hope that future clinics might reach out to fresh blood.

On another note, considerable concern has developed in the Division's 100% NMRA Clubs who buy the MNRA club liability insurance. The "three strikes" policy as outlined in a recent NMRA.org edition appears extremely limiting to the clubs' outreach and open house programs. What is the advantage to being a 100% club if the insurance is not good?

Division 3 Director Jerry Hoverson reported that:

Well, Spring has definitely sprung and the crew has been working hard to get the layout ready for this year's convention.

Speaking of the convention, if you haven't registered yet, WHAT ARE YOU WAITING FOR? This is the premier LSR event of the year not to mention a b___ load of fun!

I mentioned in the last report that the January meeting clinic was on making mountains using the Bragdon Geodesic Foam instead of plaster. And got a lot of requests to demonstrate how to color the rocks after they are formed. But with the Plano show and all the new members from there it was time to do "Model Railroading 101" again so the coloring got put off until March.

February was the first meeting after all the winter train shows and we had a record attendance, 151 members at the meeting. Now I have to say that we also hosted the youth group from Fort Worth so it wasn't all new members but a record none the less

We didn't forget about our long time members, however. In addition to holding the MR101 clinic we also had Duane present a clinic on "Signs"

So, March rolls around and we again split up the group and I do present the clinic on coloring the Geodesic Foam while Larry Swigert and Boyd Patterson continue the Model Railoading 101 clinic with our new members.

Then, in April, we gathered together tree making machines from Craig Tribuzi, Jeff Palmer, and Duane Richardson and we presented a free hands-on MAKE-N-TAKE clinic on making trees. We plan on continuing this theme in May coupled with a BBQ at Donna & Roger's house by using grapevine stocks from Donna's vineyard to add trunks to the trees.

Lot's more to come so "Keep rolling down the tracks" and we'll see you next time!

Division 4 Director Peter Kazmir reported:

It has been a busy several months since our report for the 2016 winter meeting.

This year, we've moved to bi-monthly division meetings at a new location, the Austin Northwest Recreation Center. We had meetings in January, March, and May. Our meetings typically consist of two clinics, show and tell, questions and answers, social time, deal or duds, and an area layout tour. We also have some educational material and displays in a beginner's corner as well as information and displays describing the benefits of NMRA membership and the AP program.

At the March meeting, Jerry Wilson gave a clinic on resin casting. He brought lots of examples to pass around and even made some casts during the clinic. That was followed by a one in a series of "mini clinics" by Jack Merkel about the NMRA Achievement Program. We had some great Show and Tell items as well. After the meeting we toured two area layouts owned by Rod Reams and Rudy Pirovitz.

At the May meeting, Riley Triggs gave a clinic on operations and Jack Merkel followed that with a clinic on entering NMRA contests and judging (ahead of the LSR Convention and Division Meet). Jack also showed off his 1' x 1' HO Scale, fully functional layout during Show and Tell. After the meeting we toured three Bastrop-area layouts owned by Steve Nelson, Jim Zwernemann, and Mike Barrett.

We leave flyers at First Hobbies and King's Hobby Shop in Austin and are posting meeting notices and pictures from previous meetings on our web site, http://centexnmra.org. Our meetings are usually attended by 40-50 people, including NMRA members and guests (our meetings are free and open to the public).

We recently significantly expanded our web site to include an index (with many detailed descriptions, track plans and photos) of Division layouts. We've also added a discussion forum so folks can ask questions and help others. When we announced the layout index on Facebook, we got over a thousand hits including some from as far away as Europe!

The Division has also kicked off a project to develop a permanent club in the Austin area focused on sharing the hobby with the community and introducing younger folks to the hobby. We have a number of participants and are in the planning stages, looking first for a meeting location. The club may eventually spin off into its own entity.

Our Division Meet was a success last year, and we have been making plans for this year's edition, which will be held the weekend of October 22. We are also still working on hosting the next Austin Model Railroad Jamboree in April 2017.

There are a lot of things going on with new and old participants alike. It's a great time to be a Model Railroader in Central Texas!

Division 5 Director Dave Lamberts reported:

Every year Lubbock puts on the Arts Festival. It is a pretty big deal with artists from all over the area and lots of arts and crafts. This year we were given a large room to set up our modular layout (HO). I would say it was extremely successful has we had rooms full of visitors for most of the day. We gave out dozens of our "business" cards. We had thought that just a business card was a a slight impotent way to advertise the club, so this year our vice president, Kelby Vise, wrote and had printed a three-fold brochure telling the details of our club (the Lubbock Model Railroad Association.) We passed out dozens of the flyers and hopefully will obtain some new members.

If anyone would like to see a sample of the brochure let know and I will mail you one.

Division 6 Kevin Bergeman reported:

No Report

Division 7 Director Don Kimmell reported:

Hello again from somewhat dry-at least today-North Louisiana. I hope everyone has had a productive winter and spring.

First off, I hope to see everyone, or at least some members, at the LSR Convention this June. If you are already signed up, great! If not, it is not too late to do so. If you have never heard Charlie Getz give an "after dinner speech", that alone is worth the price of the Convention! Hope to see you there.

We now have some new owners of Trends and Trains here in Shreveport, Mr. Tom has retired. I have yet to stop by, but it is on my list fro next week.

By the time you read this our "local" train show will be history. I hope to have a report on the Tyler Show-this weekend-, the Jefferson and the Shreveport Shows in the next report. Hope to see some familiar faces when I attend over the next 4 weeks.

On the local scene, Tom White has told me that the folks down at our SciPort-Imax are planning to upgrade their projector to "digital", which will open up more space for the layout there. Fun!

As far as I know-which at times is very little-none of our members have had any water damage after

our recent rains.

Again, thank you for allowing me to serve the members here in Division 7.

Go play trains!

Division 8 Director Jim Lemmond reported:

Division 8 has restarted monthly modelers clinics for NMRA members and guests. Division President, Ray Byer has organized a varied group of informational and "hands-on" clinics for 2016. The schedule and topics of the clinics are to be found on the Texas Gulf Division (Division 8) web site (http://texasgulfdivision.org). The location for the clinics are set for the Bayland Center, Bayland Park in Houston.

The San Jacinto Model Railroad club held a very successful train show in February. The show featured over a hundred vendors, modular layouts in various gauges and some very interesting and informative clinics centering on model railroading and full scale railroading. At this show we gained several new NMRA members and renewals.

This is reminder to attend the Lone Star Region Convention June 22 - 25, 2016. The convention will be held at the Sheraton Arlington Hotel in Arlington, Texas. The web link for the convention is: http://www.mainlinerails.com/

The NMRA National Convention will be held in Indianapolis, July 3 - 10, 2016. The link to the convention is: http://www.nmra2016.org/

It is with sadness to report the dissolution of a model railroad club in our Division. The Galveston Model Railroad Club and Museum is now closed. A sale of all locomotives, rolling stock, structures and DCC equipment will be offered for sale to model railroaders nationwide. The main layout features many Overland Brass Bridges and structures. Many professionally built Fine Scale Models are featured on this large layout. The layout is HO scale. The club is also selling a large separate East Broad Top Hon3 layout with the Hallmark brass locomotives and rolling stock. Featured on the HOn3 layout, modelers will find many custom build EBT structures. Look for lists and sales dates in "The Cowcatcher" magazine and emails. The sales web site is: http://www.frolin.net/forsale.html

In closing, I wish to thank members of Division 8 for electing me to another term to the LSR Board. I pledge to represent Division 8 to the best of my ability and work to improve our hobby of model railroading. You may reach me via phone at anytime at 281-229-0845 or via email at "jimlem@comcast.net".

Director-At-Large Duane Richardson reported:

Business as usual. I assisted with the meetings for Division 3 offering a monthly Tips and Tricks mini clinic as well as helping with the main clinics presented. I taught clinics at all the local train shows as well as Division 4's show in Austin last fall. I have been helping here and there in preparation for the Convention coming up.

After over 10 years as a Director of some sort I decided that I would not run for reelection this year. I am turning over my role on the board as it's time to pass the torch.

Director-At-Large Art Houston No Report.

Director-At-Large Chuck Lind reported:

Over the past 12 months I have planned 11 monthly programs for the San Jacinto Model Railroad Club (No meeting in December Christmas Party)

I have given 3 clinics on Insurance and Estate planning.

Petticoat Junction

Northwest Crossing

San Jacinto Model Railroad Club

I have also worked with 1 widow to help her evaluate and dispose of her late husbands model railroad collection O Scale, On3 and 1:20.3

I also worked with the Division 8 Director Jim Lemmond, as well as several other Division members, to help evaluate and price a very large model railroad layout and help with the sale of some of the merchandise. Gave a program at the Navasota Library Summer Programs on Railroads and Model Railroading.

Department Reports

Achievement Chair Duane Richardson reported:

It's been a bit slower year this year but we did process 11 National AP Certificates with 2 MMR confirmed, Mike Mackey, Lee Bangma, and 1 that I will be submitting with the paperwork for May.

AP Awards:
Jan Kutch - Volunteer
Roy Stockard - Electrical
Lee Bangma - Author & MMR
Boyd Patterson - Golden Spike
Don Winn - Author, Chief Dispatcher
Mike Mackey - Cars, Civil, Electrical & MMR
Jerry Wilson - Scenery & MMR (Pending)
Donna Orr - Official
Ken Kaiser - Volunteer

Contest Co-chairs Chuck Lind and Loren Neufeld no report.

Convention Chair Jack Merkel reported that:

- 2016 Convention – Scheduled June 23 – 26
- 2017 Convention – Division 8 is the host
- 2018 Convention – Need to decide on host division. Chairman needs to be in place by June 1, 2016. It takes two years to plan for a convention.
- Convention Handbook and Reports are available on the Website.

Historical Convention Rotation

Year	Division	City
2016	1&3	Arlington
2015	8	Beaumont
2014	4	Round Rock
2013	1&3	Irving
2012	8	Houston
2011	5	Lubbock
2010	6	San Antonio
2009	1&3	Irving
2008	8	Houston
2007	4	Round Rock
2006	6	San Antonio
2005	1&3	Fort Worth
2004	8	Houston
2003	5	Lubbock
2002	6	San Antonio
2001	1&3	DFW
2000	4	Austin

Historian Chair Jim Long not present – No Report.

Nominating Chair Blake Bogs reported:

My Last Report - Steve Blackson will be taking over after today.

President, Treasure, Division 1, 3, 5,7 --- Running on 2017 Ballot

Regular Elections

The special ballot passed with 98 votes. This was made up of 7 ballots via mail and 91 online votes. This is down from the 2013 election (112 votes), 2014 election (around 120 votes), 2014 constitution change (141 votes), and the 2015 election (107 votes),and the 2015 constitution change election (91 votes). We only had approximately 10% vote. This is up from the 2015 constitutional change election but down from the 2015 election. Please encourage your members to vote!

Non-Rail Virginia Feritag not present – No Report.

Publications Chair Riley Triggs reported:

The emphasis continues to be on the regular column contributors providing a strong base of material. Gert "Speed" Muller, Blake Bogs, Peter Kazmir and Duane Richardson are doing a tremendous job at producing interesting, informative and educational material for our membership.

I would like to bring focus on featuring layouts of region members, as well as contest and AP recognition. The contest and AP recognition have had an increased presence in the ML, and the interest in layout features is growing. I will need to take a more active role in producing the layout content.

Areas to address

Advertising in Pike and Dealer ads still need attention. There has been some interest in upgrading ads to color, but no new pike nor dealers are participating. There has been no particular effort to acquire new ads this year, but this is an ongoing situation.

Acquiring metrics on downloads is an ongoing project to assess how we are serving the membership, and how many people from outside the region are downloading our publication.

Long term projects update

Major projects are on hold to gather time and resources to accomplish them.

Website Chair Jeff Palmer reported that:

After the success of our first online election on the www.geekwithtrains.com website, a general election for offices was setup and done. The election of Division Directors 2,4,6,8 and At-Large Directors (3) was approved by the LSR BOD – the results of the election will be part of the Nomination Chair report. The log shows there was no duplicate voting, someone voting twice, and the polls opened and closed automatically. Normal election activity included 3 email blasts and a VOTE redirection to the LSR HOME page was done. Reporting of the vote results was done via the LSR Secretary, instead of the Nomination Chair since Blake Bogs was running for an At-Large Director's position.

The online copy of the LSR By-Laws was updated with the convention and Nomination Chair changes as approved at the January Mid-Year meeting.

All voting logs were destroyed 60 days after the close of the election as requested by the LSR Secretary and the By-Law change approved at the January Mid-Year meeting.

The old LSR website (www.lonestarregion.org) will be shutdown on January 1, 2017. This website will become the new election site.

Other web activities performed include:

1) Eighteen E-mail blasts have gone since January out for the Officer's Election (4), Marker Lamp (2), LSR 2016 Convention (6), Division 2 (3) and 8 (3) activities.

2) Posting on the LSR website for the Crescent Line Shows.
3) Updated LSR 2016 Calendar for 3rd Saturday Division 3 meetings.
4) Prepping to upgrade the LSR website to the latest version of Drupal (delayed by other activities).
5) Posted the January Mid-Year Minutes.

Youth Chair, Officer Position open - no report.

Education Chair, Officer Position open – no report

Events Chair, Bill Dryden reported:

All columns are up to date with some minor corrections pending next submittal. We continue to receive events notices sent about a week to 10 days after I have sent in the column; some timely, others .... well, what can you say?

Membership Chairs Larry Swigert reported:

There's good news and bad news…

First the good news…

The membership total for the LSR is exactly the same as it was almost a year ago, 1047 total members.

The bad news is that it's the same because some Divisions are doing well in building their membership, which is taking up the slack for the others that are slowly sinking.

I am on the NMRA National Membership Committee. We are now working on a very valuable recruiting/retention program, which is now in its final stages of production, and will be ready for you to use soon. THE NMRA RECRUITING AND RETENTION PROGRAM will be made up of all of the good recruiting ideas and programs that are bring used in Regions around the world. It will be an excellent recruiting tool for you to use to get ideas on how to build your Division.

Also, NMRA had just recently released a great new recruiting video entitled "Welcome to Model Railroading". If you did not get a copy of it just drop me an email (LS4Results@aol.com) and I'll send one your way for your Division to use. It is well done and REALLY works to attract new folks to join NMRA.

Division	2003	2015(July)	12 Yr. Gain	12Yr.Loss	2016(May)	10 m.gain	10mo.loss	13 yr. gain/loss
1 - Ft. Worth	117	163	46		177	14		60
2 - New Orleans	89	110	21		113	3		24
3 - Dallas	149	217	68		222	5		72
4 - Austin	102	136	19		126		-10	9
5 - Lubbock	53	42		-11	35		-7	-18
6 - San Antonio	127	118		-13	103		-15	-28
7 - Shreveport	32	24		-8	22		-2	-10
8 - Houston	256	237		-19	249	12		-7
*Dallas/Ft.Worth Metro	266	380	114		398	18		132
TOTAL MEMBERS	925	1047			1047			
Gain and Loss Totals			119	-51		34	-34	

Meanwhile, here is a breakdown outlining the membership growth and loss for the last 13 years. Please look it over and don't hesitate to let me know if there is "anything" I can do to help your Division grow.

Photography, Dave Lamberts No Report.

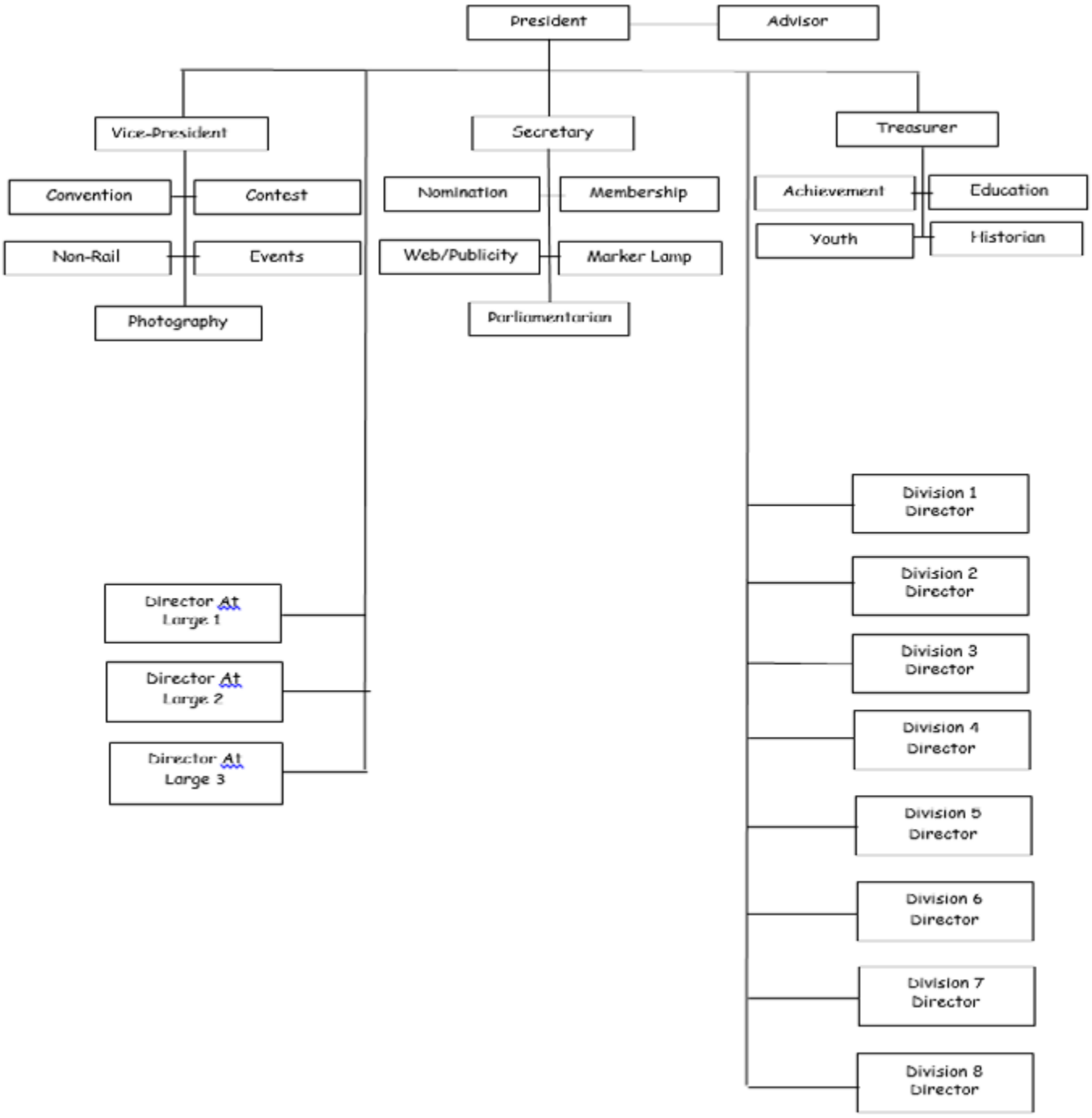
Parliamentarian, John Garfield No Report.

OLD BUSINESS

The first item up was the Beaumont 2015 Convention Report. With George Bohn, and Dave Cummings missing from the meeting, Steve Barkley and the rest of the 2015 Convention Committee have agreed to go back to the hotel and get an itemized bill and provide copies of the checks issued. The books on the convention are still not closed.

The 2016 Convention Preliminary Report indicates that this was a successful convention. The convention attendance was 209. The hotel room nights numbers were meet. Just waiting on closing the books and the final tally.

Donna report that the audit was done by Marc LaChey and Jim Lemmond. The LSR books balanced with the noted exception of the 2015 Convention funds. 2016-06-26 LSR Motion 2 passed to accept the audit results.



Donna Orr provided a budget report, Rod Fredericks provided a motion and seconded by Duane Richardson to approve the budget as submitted - 2016-06-26 LSR Motion 3, passed.

Jeff Palmer presented the updated organization chart with the correctly drawn parallel lines. The charts was accepted by the BOD in motion - 2016-06-26 LSR Motion 4. The organization chart will be placed on the website.

Jeff Palmer presented the tabled "Officer Misconduct" motion. The board want to review the NMRA procedure. That information will be emailed to the BOD following the convention. No motion was discussed or passed.

Donna Orr covered the convention time line for reporting to the treasurer convention receipts and expenses as covered in the By-Laws. No motion was discussed or passed.

NEW BUSINESS

Steve Barkley opened the new business portion of the annual meeting with the Ratification of Election and Recognition of new Officers. With their presentation and acceptance, motion designated as 2016-06-26 LSR Motion 7 passed.

Steve Blackson, the newly appointed Nomination Chair, reminded the BOD that the fall election will be for the offices of President, Treasurer, Division Directors 1, 3, 5, and 7. The bios for these offices must be submitted by December 1, 2016. The election will be for the month of March 2017.

Marc LaChey opened a discussion on LSR and Division Roles and Goals. In his discussion, it was pointed out that the interest/goals of the divisions and the region are not always in sync, especially when it comes to the annual convention. A committee was appointed to look into this issue and report back at the Mid-Year meeting. The committee consists of Bill McPherson, Donna Orr, Peter Kazmir, and chair Marc LaChey. Larry Swigert was added as an advisor to the committee.

Donna Orr addressed the NMRA Rebate to the Divisions. She outlined that this was a twice a year process as this is how the NMRA rebates fund to the LSR. She informed each division how much they would be receiving, and requested from each division to send to her how the check is to be made out. Division 7, Don Kimmell, asked to opt out of the rebate.

Blake Bogs presented the Nomination Chair document to the board as turnover for his position. This document will be added to the website.

Bob Barnett introduced Randall Wilson as the convention chair for the 2017 convention to be held in Houston near the Galleria – details to follow. Randall informed the LSR BOD that the 2017 Convention Committee will NOT be using any LSR funds.

Jeff Palmer reported his conversation with Jack Merkel about the 2018 Convention and the lack of anyone stepping up to fill the opening. A search is underway.

Bill McPherson proposed a change to Article 5 of the LSR By-Laws to better integrate the 501(c)(3). Bill's proposal was missing a couple of key components and was sent to committee (the Marc LaChey committee) for revision. The change was tabled until the Mid-Year meeting.

The meeting concluded at 12:32 PM.

Director Reports

Director's reports can be found in the Minutes of the Board Meeting above.

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by Chris Atkins
chris@railroadermodelers.com
214.222.1285
cowcatcherdivision.com

Bayou Division 2
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Division 7
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Texas Gulf Division 8
by Jim Lemond
jimlem@verzion.net

Tresurer Report

Treasurer
by Donna Orr
dlo-rls@sbcglobal.net
(972) 342-8598

For the First Fiscal Quarter of 2016/2017

Beginning Balance 05/01/2016	
LSR Checking Account	$ 6,143.18
Vanguard CD Fund	$20,394.38
Vanguard Convention Fund	$ 9,522.07
Acct Receivable for 2016 Convention	$ 2,000.00
Total LSR Net Worth	$38, 059.63

Not included in Total LSR Net Worth
Funds for the Bob Clark Award $570

LSR Proceeds	
Vanguard CD Fund Interest	$ 23.22
Vanguard Convention Fund Interest	$ 10.84
NMRA Region Rebate	$ 54.00
Dealer/Pike ads	$ 80.00
Total Proceeds	$ 168.06

LSR Disbursements	
BOD expenses	$ 57.36
Contest Expenses	$ 130.00
Total Disbursements	$ 187.36
Net Proceeds/ Disbursements	$ -19.30

Ending Balance 7/31/2016	
LSR Checking Accounts Total	$ 6,659.82
Vanguard CD Fund	$20,417.60
Vanguard Convention Fund	$ 9,532.91
Acct receivable for 2016 Convention	$ 2,000.00
Total LSR Net Worth	$38,040.33

Not included in Total LSR Net Worth
Funds for the Bob Clarke Award $ 570.00

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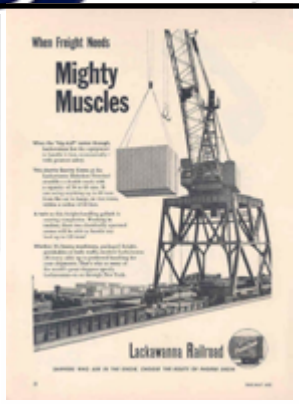

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